



## SCHOOL EDUCATION.

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INTRODUCTORY TEXT BOOK  
TO  
SCHOOL EDUCATION,  
METHOD AND SCHOOL MANAGEMENT.  
  
A Treatise on the  
PRINCIPLES, AIMS, AND INSTRUMENTS  
OF PRIMARY EDUCATION.

BY  
JOHN GILL,  
NORMAL COLLEGE, CHELTENHAM.

NEW EDITION, MUCH ENLARGED.

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## PREFATORY NOTE.

THIS book might be dedicated to the memory of Canon Moseley, sometime Inspector of Training Colleges. His reports, with their generous appreciation of the teacher's difficulties, their high ideal of his office, and their earnest advocacy of the principles that should direct, and of the spirit that should animate his work, were some of my best helps after my adoption of teaching as a profession. To his advice and encouragement this book owed its origin. Since then, it has been a growth. It is mainly an abstract of lectures given to the students of the Cheltenham Training Colleges during upwards of thirty years. In preparing these lectures, all sources at command were consulted, and were pointed out at the time. In this edition, many of these have been indicated in the index. If any fancy that some others might have been inserted, the answer is, that probably these quoted from me; as several have done me the honour to appropriate, not only extracts, but whole chapters,

as well as articles contributed anonymously to educational serials. My thanks are tendered to professors of education in this country, the United States, the Dominion, Australia, New Zealand, Africa, and India for its use as a text-book in colleges; and to School Boards for its adoption for their pupil teachers. Grateful for the success of former editions, the present one has been recast and enlarged; and it is now sent forth with the hope, that in its present form it will afford greater help to young teachers in their preparation for their important work.

CHELTENHAM,

*January 11th, 1882.*

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## SYNOPSIS OF MENTAL PHENOMENA FOR THE PURPOSES OF EDUCATION.

I. FEELING.			
<b>PRIMITIVE.</b>	<b>EMOTIONS.</b>	<b>SENTIMENTS.</b>	<b>CONSCIENCE.</b>
Craving for Movement.	Tenderness, Sympathy.	Affection, Kindness, Justice, Truthfulness, Humility.	Primitive element. Standard of duty. Moral judgment. Resistant item, obo
Wonder.	Hope.		
Curiosity.	Fear.		
Humour.	Anger.		
Beauty.	Self-regard.	Reverence.	
II. INTELLIGENCE.			
<b>PERCEPTIVE FACULTIES.</b>	<b>FORMATIVE FACULTIES.</b>	<b>REFLECTIVE FACULTIES.</b>	<b>REASONING FACULTIES.</b>
Sensations.	Memory. Language. Ideas.	Judgment. Concepts, or notions. Comparison.	Induction. Facts to law.
Perception.	Conceptive faculty.	Reflection.	Phenomena to principles.
Retention.	Scenes.	Abstraction.	Effects to causes.
Recognition.	Individuals.	Generalization.	Deduction.
Implicit judgment.	Creative faculty.	Terms.	Verification.
	Invention.	Classes.	Discovery.
	Imagination.	Division.	Demonstration.
	Sense of Relation.	Definitions.	Formal reasoning.
		Propositions.	
III. ACTIVITY.			
<b>TENDENCIES.</b>	<b>DESIRERS.</b>	<b>VOLITION.</b>	<b>HABIT</b>
Gregarious.	Approbation.	Motives.	Automatic states.
To trust.	Possession.	Irresolution.	Disposition.
" imitate.	Power.	Decision.	Temper
" construct.	Liberty.	Action.	Freedom of will.
" conceal.	Superiority.		
" action	Emulation.		
	Ambition.		

## BOOK I.

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# SCHOOL EDUCATION: ITS AIMS AND PRINCIPLES.

## PART I.—THE CHILD AND THE SCHOOL.

### CHAPTER I. INTRODUCTION.

1. **General View.**—Education aims to bring out and train up, in due time and at the proper seasons, all that constitutes man. To develop his powers, to place within his reach all that others have accomplished, to rouse him to vigorous and continued effort in behalf of his own personal improvement, to aid him to form habits which will render him a valuable member of society, and to excite him to employ his energies in behalf of social progress and national welfare ; this, and much more than this, lies within the province of education. In the child there is a temple in ruins, which it is the aim of education to remodel in all its pristine beauty. In his mind there is the image of Deity defaced ; and education, *as an instrument*, is to be employed to restore it in all its lineaments and fair proportions. Hence, in its most comprehensive scope, it embraces both time and eternity. But as it relates to the schoolroom, it chiefly includes the development of those powers, and the formation of such habits as will fit him for the discharge of social, relative, and national duties.

The development and culture of the mind constitute an important part of this work. For this object the plastic nature of children is entrusted to our care, in which marvellous faculties and affections lie hidden and undeveloped. The minds of children are capable of an expansion and growth which would fit them for noble pursuits and extensive usefulness ; but if they are uncultivated, their condition rises little above that of the brute, and existence remains a blank. They are placed in the midst of a scene containing a thousand sources of the most exquisite delight, which will be opened or sealed to them as the eye of their mind is lighted by intelligence or glazed by ignorance. There is nothing within the range of science which they may not make their own—no level which the most gifted minds have reached to which they may not attain. But success or failure, progress or retrogression, depends mainly on the culture they receive at the hands of their educators.

The formation of right habits by those committed to him is another part of the educator's duty. They will form habits which will be the charm or the curse of the social circle, which will make them instruments of good or evil to their fellow-men, and blessings or pests to their country, and whose results will extend into another life. What sort of habits they shall form depends to a certain extent on their teachers. "They," says Mr. Symons, "are moulding the character of the generations among which we and our children are to live, and by which our highest interests here must be determined." To a certain extent this is true, but not entirely. The teacher is only one of many who are thus moulding the character of the youth of our nation. Other influences besides *his* surround them ; amongst these stand prominent the influences of home and those of the streets— influences which are sometimes powerful enough to neutralize all that the teacher can exert.

**2. Education a process and a result.**—In its ordinary use, the term education expresses a process and a result. As a process, it comprises all the means used to develop and cultivate the powers of human nature, and all the influences which help to form the character. As a result, it expresses the effect of these agencies on the individual. Such effect is threefold ; it brings him to

use his faculties ; it gives him the command of them ; and it implants principles to guide him in their use. Hence it appears that the process of education is carried on by a combined agency. There is action from without and action from within. This combined action implies in the subject of education the existence of powers and capacities which require to have something presented to them to stimulate, direct, and feed them, but which have in themselves an innate activity—a tendency to work, and to seek material on which to act. So that education consists, on the one hand, in supplying objects, stimuli, and guidance to these powers, and in securing the best conditions for their development and use ; and, on the other, in the co-operation of the individual himself with these agencies.

**3. Education proceeds by law.**—The education of a child aims to bring into activity its various powers, to give them right direction, and to place them under his control. Such education does not add to the powers of human nature, nor can it alter the order in which they are developed ; but it makes use of certain means to bring these powers to a state of perfection and a capacity for use, which otherwise would not have been attained. Thus it has a sort of creative energy, inasmuch as it brings into action what would remain dormant, manifests what was latent, and communicates what was unknown. But all this can proceed only in accordance with the laws of its nature. As in lower spheres, the educator is under the dominion of law. A worker in metal gives to his material a form and fits it for use by skilfully availing himself of its properties, and would altogether fail if the properties were different. For instance, the most skilled artisan would fail to make a good razor out of a piece of bone. Just so must the educator regulate his work by the laws of the child's being : nor must he dream of success, but by availing himself of them. Could a chemist succeed who was regardless of chemical laws ?

## CHAPTER II.

### THE CHILD.

1. **The Infant and the Youth.**—The child who enters an infants' school at the age of three has in germ all the powers of the youth who leaves school at the age of fourteen. The child has certain organs, but the youth has no more. Yet what a contrast! What a change has taken place in the interval! In what does it consist? The youth has control of his organs, and skill in their use. His eyes and other senses serve him, his hands execute his wishes, and his mind can go through a thousand operations which are simply impossible to the child. Let us consider how this has been brought about, so that our work may not be fitful or haphazard, but may proceed according to natural laws, and with the hopeful certainty that our aims may be secured.

2. **What a Child is.**—Let us first glance at the conscious life of a child—the conscious life in distinction from those processes by which the material fabric is changed, repaired and preserved. The child, growing into the boy or girl, presents itself under several aspects. It exhibits various phases of feeling, intelligence, and will. It uses its senses—eyes, ears, lips, and fingers. It is ever in action, never at one stay. It walks, runs, jumps, dances, climbs, and, when it has the chance, slides or skates. It talks, laughs, shouts, and indulges in frolic and fun. It enters with zest into games, and delights in doing things which require invention, or skill, or which gratify its undying curiosity. And it stores up in its mind material, on which it is ever at work, arranging, combining, or evolving new forms. These are a few of the all but infinite manifestations of child life.

3. **Mental and Material Forces.**—When we ask how these phenomena are brought about we are met at once by the fact that there are two forces present in them, a mental and a material. The boy is made up of body and mind; and it behoves us to inquire into the relation between the two, and to separate and examine as far as we can those which belong to each, and to learn how they act and react the one on the other.

4. **Mind and Brain.**—These states and activities are brought about by the agency of the brain and nervous system. How the brain and mind are united we do not know, but we do know that their relations are so intimate and their actions so blended, that it is sometimes difficult to allot their respective parts in what are termed mental phenomena. Often terms are used of the brain which are only applicable to the mind. But this must not be taken for more than it is. For it is a common thing to attribute to the instrument what is only true of the agent; as when we praise the pen of a Dickens, or the chisel of a Canova. For nothing is so clear that states of consciousness, and the conditions indicated by such sentences as, I will, I ought, and I can, show that mind is essentially distinct from matter.

The brain and nervous system are placed as it were between the mind and the external world. They form the instrument by which the mind obtains its knowledge of things outside itself, and by which it acts on material things. All that is in the world would remain unknown to us, and all that we can do on external things by action or experiment would be impossible if it did not exist.

These relations should be studied and understood. Here are three things. First we have the material universe, with its phenomena, arrangements, and forces; then we have the mind, capable of knowing these phenomena, and of using these forces; and lastly we have an intermediate instrument, by which the two, the world and mind, are brought face to face with each other. The universe, with its wondrous mechanism and powers, would be as though it were not, if mind did not exist to know it and to use it; and this knowledge and use would be impossible to man but for that exquisite apparatus, the cerebro-spinal system. Consider for a moment what would be the condition of a child born blind, deaf, and without the sense of smell, taste, and touch. What knowledge could it have of the outer world? On the other hand, suppose a child to possess all the organs of sense, but to be destitute of motor nerves. How could it act or talk?

The connection between the brain and the mind is illustrated by such facts as the following. First, impressions by external agents, as light on the eye, are often followed by states of consciousness termed sensations. In

this case, the light is simply a force which, acting on nerves, is converted into nerve force, probably by chemical action. Then again this nerve force is transmitted by molecular movement to the sensorium, where it gives rise to a conscious or mental sense. So of other impressions by physical agents. Second, we find that a mental state, as an idea or a desire, leads to a volition, which is followed by a movement. For instance, fear of "catching a cold" may lead me to shut a window near me. In this case a mental action on the brain has generated nerve force therein, and this has been transmitted to the muscles by which the action was performed. Third, we find the mind recalling ideas, notions, and thoughts ; comparing them and forming judgments on them ; or engaging in processes of reasoning by their means. Here we have an action in the brain itself, in which it recovers, revives, or sets up states similar to some which had formerly existed, and in which it produces new states, conditions, and results.

Such facts as the above show that the brain is not a mere servant or agent of the mind, but in our present state a necessary factor in the production of mental phenomena. It would be a mistake to regard the brain and nerves as an instrument on which the mind plays, as a man might on the strings of a harp. They play a more active part, and an essential one. They are material. Yet they are endowed with properties which enable them to receive, retain, recover, and use forms and forces necessary to the production of conscious life and movement.

**5. Automatic Action.**—Many of the activities entering into the conscious life of the child are carried on by what is termed automatic action. The power which the brain and nerves have to receive, retain, and recover states, makes possible a large number of mental and physical phenomena in which the mind does not seem intentionally engaged. The control and direction of some of the bodily organs, as the legs, hands, and those of speech, have resulted in conditions in which certain actions may be commenced, and then continued without any conscious supervision by the mind. Again, actions go on in the brain itself of a like kind, such as the constant succession of states resulting in ideas and feelings similar to what have formerly existed. And this fact throws some light on most of the phenomena of memory, and other states of a

## THE CHILD AND THE SCHOOL.

still more recondite character. In all these cases we may recognise a mixture of mental and material forces and effects.

Automatic actions are not all of like degree. Some, like those termed mechanical, and those which are habitual, are of a more automatic character than others. These actions, or modes of action, were at first learned and practised with conscious intention ; but at length, when once established, are often commenced and continued without any conscious efforts. Standing erect, walking, sitting, and many manual actions are cases in point. Other actions are of a mixed character. There is much that is automatic, but they are often commenced of intention, and they may be checked, directed, or otherwise controlled by the will. These actions are altogether of mental origin, and they always proceed on lines previously laid down by the will. Speech is a case in point. At first the child's efforts are at random and are attended by many failures ; but at length the brain, nerves, and muscles "grow to" the required conditions, and automatic speech is possible. Take two instances. In ordinary conversation the thought and the volition initiate the movement and control it ; but in the recitation of poetry, after the action has been intentionally begun, it may proceed while the mind is occupied with other thoughts. Composition may furnish a similar case. The mind may be so occupied with the thought and its expression, as to bestow no attention on the penmanship, which may proceed automatically.

This tendency to take a set and to become automatic is so great, that it explains the fact that many children with much practice make no improvement in some of their acquirements—as in penmanship and reading—and further accounts for the permanent habits of adult life. The remedy with the child is to induce it to make conscious efforts to improve on his previous performances.

6. **The Mind's Action.**—The mind acts on the brain, and has power to direct and control all its activities. The first fact to be distinctly conceived is, that automatic states owe their origin to the mind, and automatic actions proceed on lines which it has laid down. The next step is to get a clear notion of the actions which go on in consequence of the action and reaction of the mind and brain on each other. We find, for instance, a constant succession

of ideas, thoughts, and feelings, without any conscious effort, but which proceeds according to well-ascertained laws. Advancing we find a sort of mixed action. The mind originates a course of thought, which as it proceeds is mingled with much that seems due to automatic action. A child solving an arithmetical problem is an illustration. Here the working out of its conditions and the elimination of anything not necessary are mental, while the calculations are automatic. These facts allowed, our next point is that altogether distinct from the physical organism we find a power to originate, direct, control, change, or suspend mental and physical states and operations. The power of attention, the power of choice, and the power of continuing or suspending its own operations demonstrate the existence of mind.

7. **Education a Complex Process.**—The education of the child must recognise this combination of mental and material agencies in its constitution. Much that the educator aims to accomplish will find its expression in those physical states and actions which form so large a part of the daily life of the child and of the man. How necessary that this educative process should be of the right kind! If it be not, conditions will be established which will impede the child's progress, neutralize much that the teacher does, or altogether frustrate his efforts. How important, to wit, must be the habits of brain, of mental working, of speech, and of manual actions to the progress of the child! How disastrous to all that should mark the man, if the automatic current of ideas, thoughts, and feelings should be trivial, mean, or impure!

Alongside of this automatic training must proceed those exercises which will call forth, train, and discipline the intellectual and moral powers. There must be no vain attempt to separate these. As a matter of fact it cannot be done. The quality of right or wrong is inseparable from every act of the intelligence. It is true that in the act itself there may be no moral quality—as in adding a number of figures. But these acts are always associated with other things, feelings, or claims, which give to them the aspect of duty. But the goal of the educator is that development of the conscience, and that culture of the will, which will make the youth the director of his own conduct.

## THE CHILD AND THE SCHOOL.

### CHAPTER III. GENERAL PRINCIPLES.

1. **Development.**—Man is a being of various powers and faculties, physical and mental. *The man* is allied to a physical nature, through which he receives all his impressions of the external world, and through which alone he acts in all his relations. This it is that renders necessary a gradual unfolding of his faculties. His relations to external nature, to his fellow-men, and to God, all imply that time and circumstances are required before he can come to the full possession of his faculties or to the complete performance of his duties. (a) Human powers require the presence of suitable circumstances to bring them into play. Their existence is to be made manifest by presenting that on which they are to be employed, or which will stimulate their activity. Powers often lie dormant until some unwonted circumstance, by calling them into action, discloses their existence. The teacher must have regard to this fact. It is not for him to disparage any of his scholars, because of the absence of some special faculty ; for it may be that the circumstances needful to stimulate it into activity have not been presented. (b) To be successful in the development of the faculties there must be regard to the order in which they present themselves. There is a dependence among many human powers of such a nature that one cannot be developed until furnished by others with the objects or circumstances necessary to its activity. Thus conscience can have no scope until certain relations have been established and understood ; imagination can have no play until the material which it weaves has been presented by the perceptive faculty, or obtained by other means. Of other powers, too, in which the dependence is not so evident, it may be safely asserted that the time of their development cannot be forestalled without injury. Not that the time can be fixed in any case when a particular faculty will be developed, so much depending on natural ability, outward circumstances, and opportunities of instruction. Yet, though no two cases may be perfectly synchronous, all follow the same order. (c) In conducting the educative process there must be nothing one-sided. There must be harmony

betwixt the great departments of education. Physical, practical, moral, æsthetical, and intellectual must run on together with such aid to each other as their mutual connection supplies. Each has an order of development peculiarly its own ; but there is a mutual dependence which makes them mutually helpful. They must be prosecuted together, and their mutual action interwoven, as their combined influence alone can produce a character neither warped nor stunted.

2. **Individuality.**—There is great diversity of ability, attainment, character, and pursuit among men. This is to be traced in great measure to inherent differences, and, of course, to Divine intention. Every mind is marked by some distinguishing peculiarity, termed the predisposition, bent, or bias of the individual. A considerable part of a teacher's duty is to discover this feature. The playground is the best sphere for its observation. This is the teacher's school of character. Observe that boy who always manages to be the driver of what he calls his horses—he is ambitious of power. Yon boy who separates himself from his companions, and is found so frequently musing with a smile now and then playing over his face—is imaginative. That little West, who sketches all sorts of things in his book, or on the walls, and among the rest, his baby-brother's face—is the future painter. The knowledge thus obtained is invaluable to the educator, who, by means of this ruling power, may obtain an influence which nothing else can give.

The recognition of the law of individuality may save the teacher some mistakes, and suggest to him some lessons. (a) He must not try to make all his scholars alike, to fit them in one mould, or to make them run in one groove. He is doubtless to give employment to all their faculties, he must recognise the truth that each is capable of education, and he must endeavour harmoniously to develop the whole man ; but so long as individuals have tastes and capacities for things which others have not—at least in the same degree—and so long as some are intended to excel where others would not, it were vain for him to look or try for the same results in every case. So Ruskin :—“ One man is made of agate, another of oak ; one of slate, another of clay. The education of the first is polishing ; of the second, seasoning ; of the third,

rending ; of the fourth, moulding. It is no use to season the agate ; it is vain to try to polish the slate ; but both are fitted, by the qualities they possess, for services in which they may be honoured." But this must not be urged as an excuse for neglecting any individual, nor must any be given up as a dunce. Every child's mind is a casket of gems ; all that is wanting is the key. For, as noticed before, faculties may be latent from the absence of proper stimuli. The motto under all discouragement is—perseverance. (b) Recognising as a fact these differences, and acknowledging as his law the obligation to educate the whole nature, the teacher must give his attention to individual cases, so as to strengthen what is weak, to repress what is evil, and generally to direct his efforts, as far as may be, to those things in which the individual is likely to fall below an attainable standard. Such attention to individual wants is required in each department of mental training. Children differ in qualities of will, intellectual features, and in predominance of feelings ; and the teacher's care must be to acquaint himself with the peculiarities in each case, that he may direct his efforts to what is most needed to produce a sound and harmonious education. (c) This study of individual character will enable the teacher to secure a community of benefit, though he cannot of endowment. A skilful teacher turns to the advantage of all the peculiarities of each. In teaching, each order of mind should yield up the thoughts or facts which are suggested as the lesson proceeds, the teacher taking care that they become common property ; and, in moral training, the defects or excellences found in individuals should be turned to account for the benefit of the whole.

3. **Predisposition.**—" The principal business, next to that of fitting the body to obey and execute the orders of the mind, is to set the mind right, that on all occasions it may be disposed to nothing but what may be suitable to the dignity and excellency of a rational creature." These words of Locke are intended to set forth as the chief aim of early training, "the forming of children's minds, and the giving them that seasoning early which shall influence their lives ever after." In other words, they inculcate the duty of predisposing the mind to what is good by a right early culture. For this end, the mind must be preoccupied

with thoughts and principles that are true, beautiful, and good. To this, exception has been taken by some writers who, ignoring or rejecting revealed truth, would have education on a natural basis. They assume that thus to form the mind is to prejudice it, and "the mind ought to be left unprejudiced on moral and religious truth." But apart from the obligation placed on us by Divine command, it has been well shown by Berkeley to be a necessity of the child's nature. "The mind of a young creature cannot remain empty; if you do not put into it that which is good, it will be sure to receive that which is bad." Molten iron running unguarded from a furnace no less surely takes some useless shape, than a mind uncared-for evil dispositions and habits; hence, if let alone, the child is ruined. For Hooker's comparison of the mind of a child "to the blank pages of a book on which you may inscribe what characters you please," contains but half a truth. The mind is not indifferent, it has a tendency to evil; or, continuing Hooker's figure, the material of the book more readily receives evil impressions than good ones.

How to form the mind rightly and to dispose it to good is the great problem in education. The duty is clear that the educator has to form it, and not leave it to form itself, or to leave it to those influences which would misform it. We must first put the mind right and then fix it. We should give a right direction to all its powers, and secure to it the highest culture of which it is capable. We must do what we can to ensure that the ordinary current of thought, feeling, and volition is right and good. And to this end we must endeavour to give valuable subjects of thought, and to supply such motives as will lead to right, generous, and noble conduct. And further, we must carefully preserve our charge from associations that would taint the mind with the base and impure.

"Delightful task! to rear the tender thought,  
To teach the young idea how to shoot;  
To pour the fresh instruction o'er the mind,  
To breathe the enlivening spirit, and to fix  
The generous purpose in the glowing breast."

**4. Permanence of Early Impressions and Habits.**—The importance of rightly predisposing the mind

is enhanced by the force and permanence of early impressions and habits. "Wax to receive, marble to retain," is the universal experience of childhood. The fact is well known. Some feelings are never lost, some ideas never perish, some habits are never thrown off.

"The odour of the wine that first shall stain  
The virgin vessel, it will long retain."

Or, as South says, "Sin taken into the soul, is like a liquid poured into a vessel; so much of it as it fills it also seasons; the touch and tincture go together. The tincture remains after the touch is over."

It is easy to see how this is so. Early impressions are permanent because the ideas of children are few, and as the mind is never unemployed, but is continually passing and repassing its possessions, they become fixed by the operation of one of its own laws—repetition. Novelty also excites interest, and this is a favourable condition to enduring impression. When objects are fresh or striking—and many things possess this quality for children—they are likely to be observed with interest, thus bringing them within the sphere of another mental law; impressions produced under excitement are most permanent. The force of early habits is aided by the tendency to take a *set*, to assume a condition, this being eminently the law of the physical frame, and to some extent, therefore, of the mind, as this is much influenced by the organism to which it is united.

Illustrations of the bearing of this law on ordinary school work may be gathered from the persistence of such things as indistinct articulation, faulty pronunciation, and holding a pen badly; from it also may be inferred, that if first learning is exact, careful, and thorough, such will be the progress; while an opposite course will produce an opposite result, which will be very difficult to unlearn; it indicates, too, that nothing should be taught or done at one period which is opposed to something else at a later one; it suggests that to make early learning unpleasantly irksome is likely to excite aversion to it never to be removed; and it shows that the younger the child the better should be the teacher.

5. Co-operation.—Co-operation is so necessary to the result sought by the educative process, that unless it is

secured the end cannot be obtained. The child must early meet the fact that its own exertions are necessary. It must not be disguised from him that only as he works can he succeed. He must be a willing co-worker with his teacher. This is essential, he must work willingly : to secure which is the special work of the teacher. A prime object, ever present to his mind, must be how to secure this willing co-operation ; and a test of his fitness is the degree in which he succeeds. Nor is he to attempt this object by removing difficulties from the path,—a spice of difficulty is an incentive to exertion, easy work being dull work,—but by such aid as will enable the pupil to surmount these, and at the same time fit him to encounter and conquer others alone. A teacher's skill is best manifested when he places his pupil's necessities in such a light as to excite a strong desire to have his wants supplied, and then shows him how by his own labour they may and must be supplied. Pleasure in his work, sympathy and encouragement in his difficulties, adaptation of work to his wants and ability, consciousness of progress, successful competition with difficulty, thoroughness as he proceeds, having nothing to unlearn, are the things which brace up a child's mind to voluntary and persevering labour.

6. **Exercise.**—The growth of human powers depends on exercise. Each faculty must be employed suitably and sufficiently in order to its growth and vigour. This is true of the whole nature. The organs of the body are strengthened and perfected by use. Each organ must be employed, if each is to be benefited. The same is true of the mental faculties. The senses must be exercised to give keenness of perception and habits of observation. The conscience must be employed if it is to discriminate quickly between the qualities of actions. Truthfulness is obtained by speaking and acting truthfully. Hence each faculty must be exercised in its own sphere. No power is immediately benefited by the exercise of another. A man, by cultivating his eye, does not thereby obtain a musical ear. It is true that the improvement of one organ imparts strength to the mind, and thus the other organs are benefited—*e.g.*, a man who has thorough command of his eye will have greater power of attention if he chooses to exert it through his ear ; but discrimination by the one

sense does not necessarily promote discrimination in another. Hence each must have its appropriate food and stimuli. To the eye must be presented colour, form, size, and distance ; to the ear sounds—musical and articulate ; to the touch, surface ; the voice must be strengthened by speech and song ; and so of the other powers. Exercise secures the growth and vigour of the faculties. Let suitable exercise be secured, and the faculty must grow. Physically, this is patent to observation, but it is no less true mentally. Strength of will, sound judgment, kindly affections, are as certain to grow, if employed on proper objects, as are the muscles of the arm by lifting heavy weights.

7. **Repetition.**—Repetition is necessary to join in indissoluble union ideas or thoughts which it is desired to connect in the mind, also complicated movements, which are necessary to the easy and complete performance of any action. It is not sufficient to exercise a faculty or an organ when desirous to benefit it, or to make some acquisition, but it must be done at proper intervals, and its length must be regulated by the frequency with which the faculty may have been previously exercised. Repetition makes an action recur more readily. After a number of repetitions facility is gained, with power to sustain the action. Complicated actions are fixed into mechanical coherence and certainty by the mere fact that they have been made to succeed each other a great number of times ; repeating by rote, writing, and knitting, are instances in point. The amount of repetition needed depends on a variety of things—the quality of the individual mind, the degree of attention given to the act, the force thrown into its performance,—hence the well-known fact of audible repetition promoting speedier acquisition,—and the age of the learner ; fewer repetitions, where the acquisition is mechanical, being required in youth than at a later period.

8. **Change.**—The continuous exercise of mind and body in childhood, after a sense of weariness is induced, tends to enfeeble them : neither can bear a continual strain, and not suffer. Continuous exercise of one power is enfeebling to all, for while one is strained, the others remain inactive ; one wears out, the others *rust out*. Yet it should be remembered that relief should be sought, not in cessation of

employment, but in change. Our constitution indicates that we are to seek a healthy condition in the successive exercise of various powers, or in the putting forth of our strength on a variety of objects in succession. The restlessness and desire of change exhibited by children after a period of application are simply manifestations of a law which has been ordained for the perfection of our being. A change of employment will be found an effectual remedy.

9. **Periodical Action.**—“This is a tendency to resume the same mode of action at stated times.” “If we repeat any kind of mental effort every day at the same hour, we at last find ourselves entering upon it without premeditation when the time approaches.” Thus, if school studies are arranged according to this law, and each taken up regularly in the same order, a natural aptitude is soon produced, which renders application more easy than by conducting the school as caprice may direct.

10. **Instruction.**—A child enters the world ignorant and helpless. It has mental and physical powers which are brought into action by things and persons external to itself. When this goes on in a prearranged way, we speak of it as education. Amongst the agencies thus set to work we have instruction; and this has played so important a part in defective schemes of education that many persons seem to think that it is the same thing. But the terms are by no means synonyms. If a man makes known to me some fact that has come under his observation, he is giving me information; if he makes plain to me some proposition in science or art, he is giving me instruction; but if he employs the latter skilfully for the *purpose* of exercising my own faculties, then he is educating me. Instruction is the art of making things clear to the understanding. It is that which throws light over an object, and renders it visible to the eye of the mind. It has the same relation to the mental faculties and the objects of mental culture that the sun has to the eye and the external world. As the eye could never revel amongst the beauties of nature without the presence of light, so the mind could never enjoy the creations of the past without instruction. Instruction is an instrument of education. It has a higher sphere than that of making the child acquainted with various kinds of knowledge; or

even of building such knowledge into his mind so as to become part and parcel of himself. It should accomplish this and more. The instructor must never forget that the child is a being of high power and destiny,—of powers capable of boundless improvement, and with a career of progress that knows no termination. All instruction should leave in the child's mind pleasure from the exercise of its faculties, and a desire to employ them again. It should also give to them increased vigour.

**II. Influences of Surroundings.—Silent Influences.**—The educative process has an active and a passive phase. The active consists in the direction of the faculties by instruction, the presentation of motives to exertion, and the active exercise of the faculties in consequence ; the passive consists in the silent influence of the surroundings of the individual, and his almost unconscious imbibing from them tastes, habitudes, and conditions that have a large influence on his modes of thought, feeling, and exertion. (a) That the surroundings of children have an educative force must be apparent to all who consider how impossible it is that they should get ideas, say of neatness or order, or tastes for them, or habits of like kind, but as they see them exemplified around them. (b) Some of the most important agencies in education are those which work thus silently and imperceptibly. Such agencies act constantly. No doubt their influence at any one moment is small, but in the aggregate it is mighty and irresistible, being in this respect like many physical agents. What it wants in present force it gains by unbroken continuity ; making up in time what it loses in immediate power. The fact of being silent forces acting unconsciously is an element of their strength. There is no thought of resistance, for there is no consciousness of aggression ; hence they have all their own way. (c) From which it must appear that it is a sad mistake—whoever makes it—to measure education solely by ascertainable results. A child's education must not be estimated as you do an apple tree, by what you can count, but rather as you do an oak, whose duration of hundreds of years, and fitness for valuable uses, are due to its slow, continuous, but almost imperceptible growth.

## CHAPTER IV.

### THE SCHOOL.

I. **Province of the School.**—1. There is a strong tendency with many to take low views of the functions of the school, as if its place were merely to supply the arts of reading, writing, and computation. But the school has a higher office than this. Its function is educative ; and it may not, without injury to the best interests of the pupils, ignore its position. “The best results of school work are not those which can be displayed in an exhibition, or tabulated in a statistical return. It would be a great misfortune if teachers were to attach higher importance to what can be seen and handled than to those influences on the understanding, and on the character of their pupils, which it will always be the first business of a good school to produce.”

2. But the relation of the educative process during childhood and youth to that of maturer life must be understood before we can fix the province of the school. On what the school can and ought to do the teacher should be clear, as no advantage can accrue from assigning to the school a higher function than it can justly claim, exacting from it results that it cannot yield, or fixing a standard that it cannot reach. It is not, then, too much to say that the influences of home during and prior to the school period, and the influences of the world—its intercourse, employments, pleasures, trials, temptations, and disappointments—after the individual has come to the full possession of his faculties, do more in the formation of his character than is possible for the school. But, conceding this, it must be contended that the precise effect of the influences he meets with in the world will depend on the preparation which his early training has given him to meet them, on the principles it has implanted, and on the habits it has formed.

3. From this relation of childhood to riper years, we may easily determine the province of the school. The precise aim of all early education is to fit the individual to be a self-educator, to put him on the path of self-improvement, to stimulate him to seek the highest personal excellence, and to furnish him with such habits and principles as will

aid him to avail himself to the utmost of his opportunities and experience. In this work, home is the sphere where the feelings find their culture, where principles of conduct are implanted, and where the foundations of habits are laid. School has to aid and strengthen this culture, but as its special work, it has to furnish those instruments of culture, that intellectual discipline, and those habits of strenuous labour, necessary to the pupil's advancement in intelligence, which will open to him higher sources of enjoyment than such as are merely animal, and which will fit him for a faithful and intelligent discharge of the duties which await him in future.

**II. Sphere of School Education.**—To accomplish its function, school education must deal with the whole nature of the child. Whatever affects the formation of his character belongs to its sphere. Hence it must be physical and mental.

**1. Physical Training and Conditions.**—These have claims on the teacher because of the intimate union of the body and mind, and because of the extent in which mental progress depends on physical states and conditions. “The mind and body are like a coat and its lining ; if you ruffle the one, you ruffle the other.” None of the operations of mind are carried on independently of the body ; hence a healthy condition of the latter must be essential to vigorous exertion by the former ; to this add, as a further reason for attention to physical training, the dependence of all parts of the body on the healthy discharge of their functions by all the other parts. Neglect of it—as in inattention to exercise, ventilation, temperature, and cleanliness—is a fruitful source of inertness, indulgence, obtuseness, temptation, and moral weakness.

**2. Mental Training.**—This in all its parts belongs to the school.

**(a) Qualities of Mind.**—Such qualities as are indicated by the terms attention, application, diligence, industry, painstaking, perseverance, courage, hardihood, self-reliance, and strength of purpose, are to be fostered in school. It is usual to speak of these as moral qualities ; but they are not necessarily such, being often connected with immoral pursuits. In fact, such qualities as these may be cultivated, and a character, having them for its basis, formed, without any moral training, properly so called, at all.

Yet these qualities are essential elements of a useful character. Some of them, too, have this peculiarity, that while they are necessary to the success of other departments of education, they are themselves strengthened by the exercises of those departments ; *e.g.*, application is necessary to acquiring a lesson, but the act of learning strengthens the power of application.

(b) **Moral Training.**—This is an indispensable part of mental culture : much neglected though it is, because its results cannot be measured but indirectly, it must be insisted on as having paramount claims on the teacher. One reason for attending to it is its importance to the happiness of the children themselves, joined with the fact that they are, for so large a portion of their time, under the teacher's care. Another, that it is necessary to the well-being of society. Other education simply increases the capacity for evil. One with such qualities of mind as those noted under (a), having also strength of body and acuteness of intellect, would be dangerous to society, had his moral training been neglected. A third reason is in the relation of moral to intellectual culture. Moral training promotes intellectual advancement. This it does by giving a high and sustained energy, such as a sense of duty and moral principle can alone supply ; by removing hindrances to progress ; and by the questions which it offers for examination and careful judgment. What obstacles to progress are indolence, stubbornness, pride, conceit, unfaithfulness, and other faults in child character, with which few but teachers are acquainted ! Let these be removed, or their influence materially lessened by judicious training, and how much would be gained at once on the side of the intellect ! Again, moral questions, especially of that practical character which occurs in school, at all times furnish matter requiring a vigorous exertion of the intellect. Such questions are usually interesting and exciting ; there is something in them which touches a chord in every heart ; and they often present facts, motives, and reasons which are found to draw out the utmost efforts of those to whom they are presented. What a wonderful influence the Bible has had in improving the intellect of those nations where it has had free circulation, and how much of this is due to the moral questions it presents, who can decide ? The school

supplies, in its society and engagements, the conditions for moral training. It is a little world in itself, in which opportunities are continually arising for practical lessons in forbearance, kindness, respect for the feelings and rights of others, truthfulness, reverence for sacred things, and acting continually from a sense of duty.

(c) *Æsthetic Culture*.—This also should form an element in school work. Direct culture should be provided in drawing, singing, poetry, and object lessons, because of the influence on the happiness of the child, and indirectly on its moral and intellectual condition. Indirectly, the surroundings of the child in the schoolroom and playground will have an influence. Children draw much of their enjoyment from externals ; theirs, to a great extent, is a sensuous, not a reflective life, and most of their pleasures, except such as are merely animal, spring from the activity of the senses. The feeling of beauty, too, is easily excited in children : many things that have lost their attractions to older persons have a pleasure-giving charm to them, because their imagination is more easily stimulated, and therefore sees a beauty that has departed from maturer eyes. On such grounds as these is attention claimed for surroundings, for the prevention of litter, and the removal of broken slates, torn books, and for keeping the furniture in decent condition.

(d) *Intellectual Culture*.—This forms an important part of school work. Such culture implies that the learner acquires power to read, write, and calculate, as these are essential to the process of self-education ; but he who is content with so much, and aims not at a higher discipline, has formed a mistaken estimate of the work of the school, and even of what is the best guarantee for rapid progress in that which is mechanical. The higher the intelligence, the more rapid and complete is the progress in acquiring the elementary arts. The aim in intellectual culture should be through the ordinary subjects to discipline the mind, so that the pupil may have those intellectual qualities which will fit him to improve himself in his future life. In other words, there should be attempted, as far as circumstances will allow, to secure to every pupil, ere his leaving school, the disposition to employ his intellect, keenness of perception, vivid imagination, strength and retentive-

ness of memory, sound judgment, and the habit of reasoning justly.

**III. Special Feature of School Work.**—The peculiarity of school education is, that the plans of the teacher are not to be framed in reference to individual necessities. This is impossible, and would be beside the purpose of the school. It has common objects and pursuits, and the plans of the teacher must be considered in reference to their influence on the mass, rather than on individuals. The true view is, that individual cases shall be used for the general good. The peculiar feature of a school being that of acting on numbers at once, the teacher will waste both time and power if he attempts to deal with individuals alone. He must often work on individuals through the mass, and he must influence the mass by his treatment of individual cases; *e.g.*, in teaching a class he should remember that, in addressing an individual, he is to instruct the class through him, hence he must be on the alert to fix the attention of all on what he is saying to one. So, in getting diligence and earnestness, he must devise his measures that he may secure a community of sentiment and conviction in their favour. So, when dealing with faults, not merely must he attempt their correction in the individual, but his measures must be wisely adapted to influence the mass in relation to such faults. “It is the true policy of the teacher,” says Abbott, “not to waste his time and strength in contending against such accidental instances of transgression as may chance to fall under his notice, but to take an enlarged and extended view of the whole ground, endeavouring to remove whole classes of faults, to elevate and improve multitudes together.”

## PART II.—PHYSICAL EDUCATION.

CHAPTER I.  
ITS AIMS.

THE objects sought in physical education are suggested by the nature of the body as an animal system, and by the relations which subsist between it and the mind. Under the former aspect we are to promote its health, vigour, and activity. These are secured by proper attention to food, air, clothing, exercise, and cleanliness. They also require that there is no inordinate demand made on any part of the system, but that there is a right and proportionate discharge of the functions of each.

But it is in the relations of the mind and body that we must seek the main objects of physical culture. Mind and body are essentially distinct, yet are mutually dependent. So intimate is this dependence, that neither can be in a disordered state, and the other remain unaffected. The famous phrase of Juvenal's, so often quoted, *mens sana in corpore sano*, shows that this has long been understood in theory, though so generally neglected in practice.

The relation of mind and body may be regarded under three aspects. First, the body is the habitation of the mind. As such it should be made fit for its noble guest. Its figure, carriage, bearing, should exhibit the beauty which was the Divine ideal in forming it, and which the success of the Greeks in its training showed it was possible to attain. Second, the body is the great medium of communication betwixt the mind and the material world. Hence another aim should be to bring the organs and instruments of this connection to the highest state of attainable perfection. This should be sought, not only by those means which will promote health, but by such exercises, adapted to the function of each, as will secure the har-

monious development and efficiency of all. Third, the dominant power in the body is the brain. It is also the depository of mental products, and the instrument in carrying on all those mental operations which have in view the discovery and possession of truth. Its development, health, and vigour are necessary alike to the right discharge of the functions both of body and mind. Hence it must never be lost sight of either in those exercises which are given for physical training, or those which employ it in intellectual and moral work.

## CHAPTER II.

### ITS PROMOTION IN SCHOOL.

ATTENTION to physical training and to those conditions which affect the health of the child properly falls within the function of the school. It is a child's right to be guarded from all hurtful influences, from forming injurious habits, and to be well fitted for its future life and pursuits. Such attention may be claimed, too, because the ultimate object of even a good physical state is the intellectual and moral benefit of the individual. Nor can such benefit be secured if physical conditions are neglected. Take, what many think the proper work of the school, *intellectual culture*. The prime factor in such culture is attention. Now let such a condition exist as to produce uneasiness, fatigue, pain, and ill-health, and the attention of the child is diverted from his work to himself. These things are imperative in their demands, and will assert a mastery over any motives employed by the teacher ; hence school-work goes to the wall ; undivided attention to it is impossible, and progress is slow, if at all. Look also at their influence on *moral states*. See how injuriously they affect the character of the child by producing fretfulness, pugnacity, irritability, and such like things. On the other hand, health, high spirits, and a good nervous state are favourable conditions for intellectual exertion, excitement of moral feelings, and the putting forth of energy, strength of purpose, self-reliance, and such as these.

It must not be supposed that we are asking for the

elementary school all that would enter into a course of scientific physical training. This would be outside its sphere, and, with the other claims upon it, would be impossible. But the schoolmaster ought to promote the physical well-being of his children by a proper regulation of school work, by careful supervision of their habits and carriage, by periodic and systematic drill exercises, and by constant attention to the ventilation, temperature, and cleanliness of the schoolroom. He should also give such instruction in physiology as will make the children acquainted with the laws of health.

### CHAPTER III.

#### SCHOOL WORK.

1. **The Brain.**—As the brain is the organ of mind, its healthy condition is essential to success in education. This organ is affected by physical conditions, moral states, and intellectual activity. *The physical conditions* necessary to a healthy brain are pure blood and alternate periods of action and repose. Like all other organs, it is strengthened by exercise, but such exercise, as in other cases, must be proportionate in nature and length to the power of the organ to sustain it. *The brain is susceptible to injury from moral states.* Fretfulness, anxiety, grief, tend to produce morbid irritation, or to diminish its vigour. *The influence of intellectual activity* depends in great measure on the age. In early life the brain is chiefly occupied in receiving impressions through the senses, and in directing those activities in which so much of the life of young children consists. During this period the brain is very susceptible of injury. It may be injured from without by glare, noise, and even by the mechanical act of reading. It may be injured, too, by stimulating the mind's own activity, by pressing things on its attention, by presenting things beyond its ability to know, and by exacting lengthened attention from it. In later years, the length rather than the nature of the exertion is the most material point.

2. **Length of Lessons.**—The length of lessons is to be determined by the power of the brain to sustain the strain.

Hence, the younger the children are, the shorter should be the lesson, because the fatigue of the brain, as of other organs, must depend on the condition of the organ itself, and on the extent to which it has been accustomed to exertion. With older children the length of time the brain can work vigorously without change of subject will primarily depend on the character of the effort required ; the severer the exertion the shorter must be the time ; but even where the effort is not very great, it cannot be indefinitely prolonged. Frequent change, then, is necessary during school hours, but this by no means involves loss, for change of subject relieves the brain, and this suits well the nature of school-work, which is a mixture of severe mental exertion with employment almost mechanical.

**3. Length of School-time.** The length of a school day must be determined primarily by the demands made on the brain. Where they are severe, or the children are young, the brain cannot sustain its efforts, even with the breaks caused by mechanical employments. To this add the sympathy of the whole system with an over-taxed organ ; the demands made by other organs for change, exercise, fresh air, and repose ; the loss of heart, zest, and spirit, when school hours are wearily prolonged,—and it will be seen that a long school day, combined with long home tasks, must tend to diminish the positive results, both mechanical and intellectual.

**4. Excessive and ill-directed Work.**—Under the strain to which children are often subjected, by the multiplicity of subjects and the long hours of labour, severe injury accrues to them in many ways. Physically, the brain is injured, the blood is impoverished, effete matters are not thrown off, and the repair of the brain is impeded. Intellectually, the results are imperfect. Severe and prolonged exertion produces exhaustion of the brain, in which the changes necessary for the assimilation and retention of learning are not completed. Ill-directed work also tells in the same way. As physiology has established the fact of molecular change and cell-formation during the act of learning, it has also made clear that such a process requires time and right method. The system of cramming many operations into a short space, and of conducting them by crude and ill-considered methods, produces mental confusion,

and may be considered as the cause of much of the stupidity found not only among children but amongst men. Educational work, right as to subjects, limited in time, and conducted by sound methods, has the promise of securing cleverness in some, and clearness of knowledge in all. But where the subjects are many, the time prolonged, the time to each subject shortened, and the methods because of the limited time faulty, nothing but evil can follow. Prolonged confinement in a vitiated atmosphere, prolonged exposure to unintelligent teaching, and prolonged exertion at home tasks, produce feeble and dull brains in unhealthy bodies.

#### CHAPTER IV.

#### PERSONAL HABITS AND BEARING.

THE teacher must give his attention daily to the condition of his children. He must inspect their hands, faces, hair, and clothes at each meeting, and he must refuse permission to stay to all who are in an unseemly state. Personal cleanliness should be a condition for admission to a school. A lavatory should be provided for the use of all, but especially of those who come from homes which have not the constant advantage of a mother's care. Besides this daily inspection there should be frequent inquiry as to washing the feet, sponging the person, and cleaning the teeth. In reference to the ailments of an infectious character to which children are liable, the teacher should take steps for the removal of any in whom the symptoms appear.

When the minds of his scholars are closely occupied, the body should be carefully guarded, lest the children form habits which would injure their health or afterwards be prejudicial to them. Hence the postures and carriage of the children require attention. Certain postures are injurious to the lungs, because they tend to compress the chest. Such are leaning against the desk and stooping when writing, holding the book close to the chest, and the head down, when reading, and so on. Retaining the same position long tires the muscles, and causes them to relax

their tension. The practice of bending the neck, when drawing or writing, tends to the distortion of the upper portion of the spinal column. Neglecting to attend to such things will produce more or less of deformity.

The carriage and bearing should receive attention, because of their importance to the child's future. A smart, active, graceful carriage is a passport to people's good graces, and an element in success in life ; while a lounging, clownish, clumsy, humpy-dumpy bearing is offensive, and may impede his advancement. Nothing so soon strikes a visitor as the cleanliness, orderly disposition, and bearing of the children of a school, or so strikingly manifests the fitness of a master for his post. And there are few things in their surroundings which have a more powerful influence on the children, or which they so unconsciously imitate, as what they see in their fellows.

## CHAPTER V.

### EXERCISE AND DRILL.

THE advantages of physical exercise are so many as to render provision for it one of the necessities of school-keeping. Such exercises give relief to the muscles, rendered necessary by a long-continued position. Young persons, however well-disposed, cannot continue in one place or position long without fatigue and a craving for change. They also let off the superfluity of so-called animal spirits, which would otherwise break loose and run riot in mischief. When they follow severe application they give relief to the brain, by diffusing the nervous power which had previously been concentrated in the brain. They produce good feeling between the teacher and children, and among the children themselves. They offer an easy and effectual mode of promoting habits of prompt obedience.

The conditions which should be sought in physical exercise are the following :—they should be such as are likely to enlist the willing activity of the children. Such as induce them to throw their whole soul into them will be the most efficacious, physically and mentally. Hence such are the best which call forth the merry laugh, the

joyous shout, the witty or humorous remark, or earnest imitation. They should be such as will quicken the breathing and strengthen the lungs, and especially so after severe mental exertion, because the supply of blood to the brain, to recruit its exhausted energies, is more likely to be rapid. There should be great diversity, so that when the children tire of one, or the muscles are fatigued by it, others may be engaged in with fresh ardour.

*The means* of exercise at a teacher's command are drill, motions tending to expand the chest and stretch the muscles, reading aloud (by the children) for the whole school humorous and laughter-provoking pieces, singing, and the ordinary outdoor games.

## CHAPTER VI.

### THE SCHOOLROOM.

1. **Pure Air.**—The importance of pure air to the inmates of a school cannot be exaggerated. On the purity of the air depends the activity of the brain. For the power of this organ to discharge its functions depends on its supply of pure blood ; and where this becomes impure from vitiated air, there are languor, headache, indisposition to work, and impaired power. It has also an influence on the comfort of all in the school. On the purity of the air depends largely the heat of the system ; the temperature being higher, there is greater power to sustain cold. The higher temperature of a bird is due to its rapid inspirations ; the heat experienced from exercise is due to the same cause. Teachers in a very high temperature in school often complain of cold ; a fact that is due to the proportion of oxygen being below what it ought to be. In pure air there are good spirits, an exhilarating influence on the temper, so that work is felt to be no hardship. Listen to children's shouts in the open air. The health must be impaired by continually breathing impure air. The vital powers become impaired, the system is more liable to disease, and there is often laid the foundation of serious complaints.

The sources of impure air in school are respiration, fires,

exhalations from the bodies and clothes of the children, animal matter deposited on the walls, ceiling, and floors from such exhalations, and dust.

The means to make or preserve it pure are ventilation and cleanliness. If it may be without exposing any to draughts, a window should always be open. Monitors should be appointed to open windows and doors during changes of lessons. The doors and windows should be open while the children are in the playground or at dinner, and for a while before school is opened in the morning, and after it is closed at night. The walls, floor, furniture, windows, and other places, should be kept scrupulously clean. Every thing or place should be washed at short intervals, and everything cleaned from dust daily. There should be no accumulation of litter.

2. Temperature.—Not so constant or imperative in its demands as pure air, yet it has sufficient influence on physical and mental functions to give it a claim to attention. As the temperature of the air lowers, there is increased activity of the lungs and of the circulation, in consequence of which there is more heat generated. The body has in itself, therefore, a power of accommodating itself to its necessities. So long as cold is not in excess, it stimulates nervous action, and provokes bodily and mental activity, but in excess it is injurious to body and mind. It impairs the vital activities, makes the blood to stagnate, lowers the tone of the nerves, and produces general derangement of the organic functions. A teacher should train his scholars not to be so animal in their pleasures as to seek gratification from external warmth, but to find this in exercise and pure air. He should keep his schoolroom at a uniform temperature as far as possible, and, when possible, not higher than 60. He must never judge of the temperature by his own feelings. He should keep up a supply of pure air, and in very cold weather he should give them additional exercise and an occasional run in the open air.

3. Sunlight.—The provision for light belongs to the architect rather than to the teacher, but it is important that a few things should be remembered. Light has an influence on the health and spirits. School ought to be cheerful. Excess of light—glaring or dazzling—is to be avoided. It produces a strain on the eye, and induces

drowsiness. The colour on the wall should be quiet; a stone colour or lightish brown would do. Deficiency of light also produces a strain, and has a depressing influence. Dark corners should never be employed for lessons. The way in which the light falls is of some consequence; if possible, it should fall from the left.

## PART III.—MORAL EDUCATION.

### CHAPTER I.

#### ITS NATURE AND CLAIMS.

MORAL education is training to morality of life. Its aim is to unite in the character right sentiments, right principles, and right habits. It does this by such cultivation of the moral intelligence as will give a standard of duty and principles of conduct ; by a right culture of the feelings, and by a proper discipline of the will. It seeks to accomplish these ends by religious and moral lessons, and by leading the child to feel rightly and thence to act rightly ; and for this purpose it skilfully avails itself of the laws of association, habit, and conscience.

Moral training is a necessity of the elementary school. Such training is not a result of its ordinary work. It is not denied that such work has an influence, but, by itself, it does not produce moral results. This is the more to be insisted upon because of the loose and pernicious opinions held by many respecting it. Much has been said in modern times on the connection between ignorance and crime. Many seem to think that a higher morality in a community depends on the diffusion of the elements of learning therein. That there is no necessary connection has been abundantly verified in all ages. In fact, it is difficult to conceive that there should be any necessary connection between skill in certain arts—as reading, writing, and arithmetic, the ordinary work of the elementary schools—and true morality. “Instruction by itself is an instrument of which either a good or bad use might be made. That which is learned in elementary schools, and which consists in knowing how to read, write, and cipher, cannot exercise much influence on morals. In fact, we should be puzzled to understand how it would be possible to give a man regular

habits and just moral sentiments, by merely teaching him to perform certain operations almost mechanical, such as reading and writing are. We can much easier imagine that even a superior kind of instruction, when purely intellectual, is likely to cause a multitude of social wants to spring up, which, if they are not satisfied, often incite to crime ; for instruction multiplies the social relations ; it is the soul of commerce and industry ; it also creates among individuals a thousand opportunities of fraud or bad faith, which do not often exist among a rude or ignorant population. We will admit that the cultivation of the intellect alone has some effect, in so far as it tends to make immediate impulse yield to reason, and tends also to form some habits of order and industry. But it is at least insufficient."

On the other hand too much must not be expected from the school. For the occasions are not always at hand for the cultivation of any particular feeling and its appropriate action. In the cultivation of intelligence, the means may be extemporized if they are not ready to hand, but it is not so with moral feelings. It is true that occasions as they occur may be seized, and, as Locke says, when possible they should be made, but in many cases it is impossible ; and, if the occasions cannot be made, systematic culture cannot be had.

## CHAPTER II.

### MORAL INTELLIGENCE.

**I. The Aim.**—The highest aim of a teacher is to implant religious and moral principles in the mind of his charge ; principles not merely as matters of sentiment or points of speculation, but with a controlling efficacy in the heart and life. One of the means is the cultivation of the moral intelligence—one of the means, but not the only one ; for there may be the knowledge of duty without the will to do it. To the implanting of moral principles in the mind there are required two things ; first, to give clear conceptions of relations and duties, and of the motives by which conduct should be regulated ; second, to

cultivate the moral judgment. These are essential parts of one process ; they are to be accomplished together, they are to go hand in hand in every moral lesson. The instruction is imperfect if it does not embrace clear conceptions of truth, and recognition of its claims by the conscience. The intellect is to be informed that the conscience may be guided. Moral truth is to be lodged in the memory, that the conscience may give no uncertain sound in its decisions. Moral instruction is imperfect which does not secure the application by the conscience to personal duty.

**II. Moral and Religious Instruction.**—Incident and example form the mode of moral instruction at school. It were worse than useless to present such truth abstractly. The condition of their intelligence, and the nature of the truth, make it to children, then, merely a form of words. Of such things as integrity, candour, and kindness, a child can form no conception, except when presented to him as acts. Nor can his moral judgment be exercised unless circumstances within the sphere of his experience, and conceivable by his imagination, are presented to him. The power to apply truth to his own circumstances, and to deduce rules for his own guidance, also depends on his realization of it in actual conduct.

**1. Incidental Lessons.**—Occasions for this cultivation are continually offering themselves. When a child is realizing the natural consequences of its actions, a favourable opportunity exists for pointing out the connection between them. This done judiciously, the conception is likely to be clear, the impression permanent, and a rule for future guidance formed. Instances of conduct observed by the children may also be turned to good account,—only in cases of wrong-doing they must be treated without personal reference, or the heart of the offender may be closed, and the sympathy of all turned in his favour. In all instances of conduct, care must be taken to bring them vividly before the children, who must be encouraged to form and pronounce moral decisions upon them, the teacher guiding them by bringing out clearly the essential points, and supplying them with analogous cases.

**2. Formal Moral Lessons.**—Incidental occasions do not supply all that is necessary for the cultivation of moral intelligence ; there must be systematic instruction :

the incidental is too desultory to give the highest culture to the moral sense. The culture of this faculty requires to be as systematic as that of any other. Discrimination and vigour can be secured only by periodical systematic culture. Nor is the necessity met by such moral instruction as crops up in Bible lessons. No doubt these lessons could be so ordered as to be chiefly of a moral kind, but that would be to promote one thing at the expense of another. Religious teaching has in charge not only moral culture, but the inculcation of religious truth and duty. To the Bible the teacher will go for examples, for the precept which embodies a principle or duty, and for the highest sanctions of moral duty.

**3. Kind of Examples.**—The sort of example on which the moral judgment is to be exercised, and from which moral principles are to be educed, is a matter of great moment. To the use of evil examples there are serious objections. The proneness to evil, which is a feature of human nature, makes it hazardous to describe forms of vice. The love of novelty, or the tendency to imitation, may lead the children to copy that which was intended for a warning. The force of first impressions would suggest that good, not evil—right, not wrong—truth, not error, should be first held up to view. Descriptions of evil tend to make the mind familiar with it, which cannot but lower its tone. The delineation, too, may remain as a picture in the mind, and may become a source of temptation when the lesson that was deduced is forgotten or powerless. Such delineations, too, may harm by placing ideas in the mind which but for them had found no admission there. Good examples, then, are to be preferred as the medium of moral teaching, not only because of the evils incident to the opposite course, but really as being the only effective way of forming the moral intelligence. Ideas of evil, and warnings from it, no more secure a knowledge of moral truth, or preserve from the commission of wrong, than acquaintance with error gives a knowledge of truth. As the best safeguard from error is truth, so the best way to preserve the mind from impurity is to fill it with ideas of “whatever is pure, lovely, and of good report.” The examples ought to be within the sphere of child-experience, otherwise it will be impossible for their imagination to realize the circumstances, and the lesson will be lost; or

worse, the child will be stimulated to use forms of expression which to him have no vital force, with the certain effect of being hardened against their influence at a future time. Nor will he lose eventually by being restricted to the present ; for if the mind in early life gains the habit of right thought and feeling, there is warrant in this fact that it will continue so under the circumstances of later life. To think of duty now is the surest guarantee that duty will be the pole-star of the future.

**III. Importance of Action.**—The only moral culture worthy of the name is that which leads the children to act. Moral instruction is necessary, of course, as a child must be taught what is right in order to practise it ; but it is not sufficient, no more than is the theory of music to make a man a musician, or a knowledge of perspective and of lights and shades to make a man a painter. Between the knowledge of what is right and the doing what is right there are two stages—feeling and volition. We must know, feel, and will. Action is the only real educator in morals. Thus Mr. Stow,—“ The way to do a thing is just to do it.”

### CHAPTER III.

#### THE FEELINGS.

THE feelings form one of the great divisions of mental phenomena ; they are not to be marked out by definition from other departments, but the distinction between them is clear to every one that has ever felt hunger, had gratification in eating, looked with pleasure on a sunlit landscape, or been excited to indignation by an act of cruelty. The feelings are motives to action, they are the seat of the disposition, and they are intimately connected with temper. Moral life, too, consists in right action proceeding from right feeling. These things show that they furnish not unimportant elements to the character ; their laws, therefore, require to be studied by teachers.

**I. Laws of Feeling.**—Feeling is excited by the presence of its object in fact or idea ; e.g., a case of distress actually witnessed would excite compassion, and the same

result would follow from a picture of distress being present to the imagination. One feeling often introduces another ; thus, pity for suffering may introduce indignation against him who produces it. One feeling may exclude another by prior occupation, because stronger in character than the one which seeks admission. The habitual practice of the action which is the proper expression of a feeling may produce the feeling ; *e.g.*, acts of courtesy often performed may at length excite the feelings from which such acts should spring.

These are the laws of simple feeling, but the growth of a right disposition depends on a higher law than the mere excitement of feeling. Feeling does not exist for its own sake merely ; it is a stimulus, a means to an end, and it is as this is attained, or repressed in obedience to a higher feeling, that its great purpose in the human economy is achieved. The great law of feeling regarded as a motive power, and in the result—disposition—is action. It is as a feeling does or does not uniformly find its issue in action, that its power over the mind and in forming the disposition depends. A feeling frequently experienced, which does not issue in action, is a mere sentiment ; and it is an every-day observation that all feeling, if action does not follow the prompting, tends to become mere sentiment—*i.e.*, to have no power over the conduct. So of disposition ; this depends on the uniformity with which particular feelings have swayed the conduct ; *e.g.*, any one who habitually acts out a benevolent feeling obtains a benevolent disposition. It is true also of temper, or the power which the mind has to resist certain feelings and to control their expression. By steadily refraining from the action to which a certain feeling tends, power is at length obtained over its manifestation, and so the feeling comes to lose its power to stir the mind. On this law of action, too, depends the hold which moral principles take of the mind. It is by acting out right feelings that a clear conception is gained of moral obligation, and that moral principles become a motive power in the heart and life. “He that doeth His will shall know of the doctrine.”

**II. Scope in School Education.**—The teacher's success in the formation of character will depend on his realization of the value of action over precept. It must be his

aim to give principles planted in the intellect vital force ; and this can be done only by finding opportunities for them to be acted out. As far as it is the teacher's work at all, it is his work to find means to strengthen or weaken the force of particular feelings over the mind and conduct. This must regulate his intercourse with his pupils, and their intercourse with each other. It must give the tone to his moral instruction ; it must guide his discipline ; it must be the key to all he does. When a feeling is one to which it is desirable to give permanent influence over the mind, occasions should be turned to account, and, if possible, should be made ; when it is one that would be pernicious, the means of carrying it out should be removed, or an attempt should be made to occupy the mind with another feeling, or if possible to awaken a higher feeling.

A right appreciation of this subject will make the teacher careful how far he excites feeling by appealing to the imagination. It is legitimate in some cases—in fact, desirable—to do so, but it must be done with caution. That which is brought into view must be within children's sphere. It must be possible for them to carry it out. It should be accompanied by earnest recommendation to find the means of action, and appeals should be made to the conscience as to their doing so ; such appeals to be received in silence, as no ostentatious display is allowable. The great danger in addressing the imagination is, lest great principles and noble examples become mere matters of sentiment. A person may admire conduct in another, nay, may be moved to enthusiasm by it, and yet never suppose that it is to have any influence on him. He never thinks of the principles in such conduct as binding upon himself.

A right culture of the feelings may render unnecessary many prohibitions. Just as when one establishes a principle which includes under it many details, and thus renders the separate proof of each unnecessary, so the cultivation of one right feeling excludes the necessity of prohibiting all those things in detail which would be a violation of the feeling : *e.g.*, the cultivation of the sense of justice would prevent late-coming, idleness, tale-bearing, scratching desks, defacing walls, copying, and so forth.

**III. Emotions.**—Emotion is a term often used as synonymous with feeling, though more frequently to denote

such feelings as require a prior act of the intelligence to excite them. Sometimes it designates that accompaniment of all feeling by which its existence is manifested to others. The two latter uses of the term suggest some facts having an educational bearing. The power of recovering the past varies much in individuals, and varies in individuals as to different objects. A fact this of great importance educationally. For as feelings are incentives to action, and as their power as stimuli depends on their strength, it is evident that, in some cases, the persistence in idea of some feelings will be so weak as to be almost inoperative. This explains in some cases why motives that are effectual in some have no power over others. Emotion has a tendency to diffuse itself, so as to make the whole system participate in a movement. This explains partly why a child's progress in learning anything new of a mechanical kind, as writing, is so slow; all the organs participating in the movement, prevents that concentration of attention and nervous energy necessary to mastering a mechanical movement. In cases where the feeling is too strong for repression of the visible expression, it is often well to divert the manifestation into another channel. Hence the value of the song, the march, and the clap, in school.

## CHAPTER IV.

### THE WILL.

THE will originates and controls actions both of body and mind. It controls the organs termed voluntary; *i.e.*, it directs them to any action for which they are fitted. The chief thing to notice in this is that the power of control is a thing of growth. First effects are always inferior to what is ultimately attained. The law for this growth is to give attention to the mode of action rather than the intended effect; *e.g.*, in learning to write, to direct attention to the holding of the pen and mastery of the movements before the forms of the letters. It controls the feelings indirectly, by suppression of the visible expression, or through the thoughts. In the latter case, by directing

attention to something else than that which is exciting, or likely to excite the feeling. It controls the thoughts indirectly, by directing attention to any topic it pleases. Hence it originates and controls actions. Strength of will, as set forth in such terms as decision, firmness, constancy, is that which constitutes the difference between one man and another. He who has it has the power and habit of making a deliberate choice, and of holding steadily to it when made. In it he has the mastery over his desires, his passions, his actions, himself, so that he can direct all his activity as he pleases. Defects of will, constituting the weak-minded, are wilfulness, irresolution, stubbornness, and inconstancy.

That which determines the will is called a motive. Generally opposite motives—that is, motives leading to opposite lines of conduct—are present to the mind. The will yields to the strongest motive. All are not influenced by motives of the same kind or strength; some are more influenced by the present than by the past; others are influenced by the things present in thought as much as by the things themselves—a fact that explains the difference between one who procrastinates and one who does his work at the proper time. A feeble will needs a strong motive, which explains why children need greater pleasure or greater pain to move them to some courses of action than older persons require. The future has little influence with children when placed in competition with present solicitations—hence the necessity of giving other motives besides the distant. Severe pain is not often a strong motive; a child who had been subjected invariably to a small punishment would be more influenced thereby than by one severe one.

The foundation of all education is in the culture of the will; and on the success with which it is attended depend the most important results in every department of education. It is also the chief difficulty in education. Children hereafter are to be masters of their own conduct; at present they must submit to their teacher's wishes. They are required to be in subjection, yet to attain firmness, strength, decision, and constancy. These require two different kinds of treatment, apparently opposite in nature; one of subjection and restraint, the other of liberty and independence. The habit of obedience to authority lies at the

foundation of this training ; it is in yielding to the will of another that the child receives its first lessons in self-control. It is only as commands impose them, or authority requires them, that a child has a warrant for many of its actions, and learns to control impulses which would lead it astray. So long as higher motives are weak, and impulses strong, authority is required to strengthen the former, and to give the will power to resist the latter. It is thus the child must be saved from indecision and wilfulness. Self-control requires the co-operation of the child. When life advances the reason strengthens, and the child becomes conscious of a growing power of control, combined with the consciousness that it will ultimately have to act for itself. For this condition the teacher must be prepared. He must not expect co-operation unless he recognises the nascent power of his charge, but instead will excite obstinacy or rebellion. The change from authority to freedom must be gradual ; and authority must ever be at hand to prescribe the conduct if necessary. Training to freedom may begin by explaining, after obedience has been exacted, why the child was required to act in such a way. Next, when his intelligence increases, he may be informed of the reasons of the conduct required from him, and his co-operation invited. This recognises him as a reasonable being, and cannot but be gratifying. In addition to this there must be trust. There are things which he knows he ought to do, and which his own convictions would lead him to do ; these must not be imposed by command, for that would imply distrust and excite resistance. Again, experience or previous instruction has given him certain principles of conduct ; in such a case he ought not to be burdened with minute directions for special circumstances, as though he could not be trusted to apply what he knows. He may also occasionally be placed in circumstances which imply trust or make him feel responsibility. By means like these, if authority is at hand to sustain what is right, he may be trained to habits of self-control and fitted for the liberty that awaits him in the future. Defects of will are owing to improper training in relation to either authority or freedom. Take the case in which too much freedom is allowed, or the one where the child's understanding is the measure of his duty. In this case the mind of the child,

not being capable of estimating the force of arguments, and where for an opposite course there may seem to him equally strong reasons, must of necessity become wilful and vacillating. A similar result would follow an opposite treatment, where authority prescribes the minutest particulars of the child's conduct, and punishment follows the least deviation from the letter. Here fearfulness of responsibility and weakness of purpose would follow naturally. Again, a harsh discipline is opposed to real strength of will. Let there be a discipline in school in which there is no trace of sympathy with child-nature, no provision to strengthen half-formed purposes, no appreciation of hidden motives, and no understanding of child-spirit ; but instead, the stern tone of authority combined with relentless severity ; and the result is, minds sullen, gloomy, suspicious, and cunning.

## CHAPTER V. DISPOSITION.

DISPOSITION is not innate, but acquired. It expresses a result of educational processes in connection with the feelings ; it is the inclination of the mind to certain courses of feeling and action. The growth of disposition is somewhat as follows:—a feeling is excited by some object, and solicits to action ; the individual, after it may be resistance or hesitation, complies. Again the same course takes place, and again, until the mind at length takes the initiative, and is inclined to act without solicitation, or the feeling has permanent control over the mind, so that occasion only is wanted for it to act of itself. Hence disposition may be said to be the inclination to do what at first required solicitation to do. Disposition embraces such things as truthfulness, honesty, kindness, humility, and their opposites.

I. **Truthfulness.**—1. A truthful disposition is the foundation, the corner-stone of virtuous character ; it is the “central pillar of the school, on which all other graces depend.” It includes accuracy in obtaining or stating facts, sincerity, candour, ingenuousness, and uprightness. The want of it is manifested by careless inaccuracy, excuses for

faults, exaggeration, equivocation, dissimulation, evasion, flattery, hypocrisy, concealment of truth, copying a school-fellow's exercise, prompting answers, as well as by a direct lie.

2. The teacher must guard his children from all forms of untruthfulness, and, as he may, inspire them with the love of truth. To this end he must enlighten their minds on its nature, and on the various ways in which it is departed from ; he must excite deep abhorrence for deceit in any shape by speaking of it with grief and serious displeasure ; and he must endeavour that they may see and feel the importance of truthfulness—which is by no means an easy thing. The teacher must himself exemplify it. He must be truthful in disposition, he must be transparent in all his dealings, his practices in school work must be open, uniform, and above-board. Hence there must be no special preparation for inspection, no throwing dust in the eyes of visitors, no putting on the school a face for special occasions. He must be truthful, and must make it appear that he is so. His statements should be accurate, his promises fulfilled, his pretensions or assumptions no more than facts warrant, and his candour and justice unimpeachable. Nor is this sufficient ; he must be careful that his measures do not tempt to untruthfulness. These may do so if he convey the impression that he attaches more importance to cleverness than goodness, if he stimulate vanity by extravagant commendation, or should he praise for the performance of duties which commend themselves to the child's conscience without his sanction or imposition, and especially if by undue severity he should make fear the ruling motive in his school.

3. The teacher must condemn all kinds of deceit. The deepest abhorrence must be expressed, not only of actual falsehood, but at the slightest attempt to deceive—as when a lad whispers a reply to his neighbour, or steals a glance at his fellow's slate. *Trust till deceived.* A very powerful means of impressing a child with the importance of this virtue is never to doubt its word or conduct unless it has previously deceived us. We should treat it as if it were impossible for it to tell a lie. We should be vigilant—never suspicious. Few things are more baneful in their influence than suspicion. A boy is strongly tempted to be what we suspect him. When untruthfulness does

occur, let your conduct show that your confidence in him is shaken, but not destroyed. Still, amongst the means employed to produce truthfulness, the teacher must depend on the natural consequences of truth or of deceit, to awaken the mind to the importance of the one or the evil of the other. Truth must be expected from all as a matter of course, and confidence reposed in them so long as truthfulness exists ; but on deceit or falsehood occurring, there must be the infliction of pain, and the withdrawal of confidence to some extent. No longer must any statement be sought from such a one or accepted if volunteered, until there have been signs of penitence and evidence of amendment. But before withdrawing confidence there should be full evidence of the fact of falsehood. The child must not be dealt with on mere suspicion. If there is ground to suspect, the fact should be ascertained before making the charge, and if that cannot be done, the charge should be withheld. There should be no difference in the treatment of the child then, though it may be vigilantly watched, that the teacher may deal with it rightly.

4. When faults are committed, the temptation to conceal or deny arises either from fear of punishment, or from fear of sinking in the estimation of others. Now these should be treated as despicable feelings, and the courage that confesses a fault should be commended. Not that confession should release from punishment—though it might be a reason for diminishing its severity—as then confession would become a matter of course without any compunction for offending or any desire to amend. Confession must be warily dealt with ; if volunteered it is to be commended, but it is of doubtful benefit when stimulated. It is a practice in some schools to require offenders to confess by lifting the hand, rising from their seats, or coming to the teacher. This is done in the belief that it promotes ingenuousness, inspires with moral courage, and imparts a lofty moral tone to the school. This is doubtful ; it is a trial few can stand. There is no certainty that confession will be made, or, if made, will be attended with good results. Schools have been in which this practice prevailed, and in which untruthfulness to an unwonted extent was manifested in copying and prompting, and where indifference to exposure, reckless bearing, and hardened

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feeling, had taken the place of susceptibility to shame and blame.

II. **Honesty.**—1. A conscientious regard for the rights and property of others lies at the foundation of the social fabric, and if greater attention were given to it in the training of the child, the safety, strength, and happiness of the community would be more completely secured.

2. As in other branches of moral discipline, the teacher's aim should be to implant the principle in the disposition, rather than to prohibit certain acts ; and he will do this most effectually by giving the widest scope to his interpretation of the sentiment and its manifestations in his own conduct and character. His example will be the most effective teaching of conscientiousness in relation to the rights and property of others. He who desires that it should be so will be scrupulously punctual in opening and closing school, in keeping his lessons within the time allotted to them, in the distribution of his work through the school, and in the faithful and diligent discharge of his daily duty therein. He will show it in his respect for the property of the children—neither lending nor using anything of theirs without their sanction ; in the careful treatment of school property, and in the proper disposal of things found ; he will also be candid, never making unfair statements, nor withholding praise when it is due, nor refusing credit for work done or attainments made. In a word, he will be bound towards them and others by the same principles and laws that he expects to influence them in their conduct to him and each other.

3. (a) It is quite possible to obtain a high moral tone in school in relation to others' property. Purloining such things as pens, or keeping things that had been lost, would in every case receive attention. But there are other practices of which children are guilty, which, if properly treated, will do more to implant the principle than any treatment of actual thefts. Little things, so called, do more for the character than flagrant breaches of trust, or the resistance of strong temptation : in the latter case fear, and not virtuous principle, may be the safeguard ; and in the former there is reason to fear that integrity of character has been lost. (b) Many opportunities occur in school life in which to enforce this virtue, and many of the ordinary measures employed in working the school will, if rightly used, tend

to implant the principle. Habits of diligence, of strenuous application, of bending all the energy possessed to the work of the hour, of a scrupulous employment of time, may be so enforced as to create the feeling that their opposites, or any deficiencies even, may be evidences of the want of a conscientious regard for the rights of others. This is to be insisted on the more because of the widespread feeling among operatives not to work to the utmost of their ability, but to make "a job" last as long as possible. (c) The right of place in class, the contention sometimes witnessed for places, and the conduct at play, may often be turned to good account: right feeling in such matters implanted in school would extend into later life. To what but the absence of such feelings must be attributed the unseemly scramble for the best places on public occasions, or the getting served "before your turn" at the shop, the money-order office, the bank, or the railway? (d) The treatment by the scholars of the school property is one of those things of which a judicious teacher will take advantage, to enforce the practice of this virtue. It is not an unusual thing for boys to carve the desks and doors, or to disfigure the walls with writing; the teacher should seize the opportunity of any instance of the sort to point out the dishonesty thereof. Stress should be laid on the breach of trust it involves to the school managers. The expense of school fittings ought to be noticed, and that such conduct renders it necessary to replenish or repair oftener than would be otherwise required; and the disfigurement ought to be dwelt upon as destructive of that feeling with which well-ordered minds look upon well-preserved or beautiful objects. (e) The treatment of their clothes, of their books, and other implements, will often furnish opportunity for a practical lesson on this virtue. The practice of using caps for foot-balls, of tossing bonnets in the air, of kneeling at marbles, ought to be prevented. Games which excite covetousness, as pitch-and-toss, or playing for marbles, ought to be forbidden. (f) There is a practice in low-toned schools of boys copying from their neighbours. The sin of this should be pointed out; they ought to be made to feel that it is a breach of the command, "Thou shalt not steal." Here it should be shown that it is not taking money or other valuables that is forbidden, but the act

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of taking anything that does not belong to us. The teacher should show that everybody treats with scorn such as pretend to know that of which they are ignorant ; and he should lead them to seek pleasure in the possession of knowledge, rather than being thought to have it.

III. Kindness.—1. Disinterestedness is an original element in human nature, but it requires fostering, or the education of the child is imperfect. (a) Much to which a child is subjected tends to concentrate the regards of the child upon itself ; but it has so many points of contact with others, and its own and others' happiness are so mutually dependent, that the child must be trained not to live for itself. (b) It is an instinct to seek the happiness of others, readily observable in a child, who at any time will share with another what yields pleasure to itself, unless its appetites have been unduly exercised. In doing so it is not selfish, but purely disinterested, neither seeking nor expecting any return. It is true that kindness yields pleasure to its subject, but this is not the motive power. (c) This being so, instances of unkindness amongst children must have their origin in something which overpowers the benevolent instinct, or that renders it inoperative. The presence of any strong feeling, or the predominance of an emotion or pursuit, may for the time overpower the benevolent instinct ; or the child guilty of unkindness may not have been accustomed to interpret in another the expression of what is disagreeable or painful ; hence it has no notion that its conduct gives pain ; or it may lack imagination, so that it does not realize that what would be disagreeable to itself is so to another ; or unkindness may proceed from mere thoughtlessness, the child not considering the consequences of its actions, or so intent on something else as to overlook them. Instances of unkindness seldom proceed from utter indifference to the happiness of others, unless the feeling that prompts to benevolent deeds has been uniformly resisted, or unless an emotion has been excited which seeks vent in the infliction of positive pain. From these things it will appear that what seem instances of deliberate cruelty may be far from having such an origin.

2. The cultivation of the benevolent instinct leads to a disposition marked by generosity, magnanimity, self-denial for the advantage of others, civility, consideration

for the feelings of others, forbearance under provocation, and to services to save others from annoyance, or to promote their comfort or well-being. Its right cultivation in school will go far to exclude those forms of annoyance by which children sometimes inflict pain one on the other,—such as nicknaming, teasing, practical jokes, bullying, ridicule of the deformed, or whatever else is productive of unpleasant feeling.

3. In fostering this disposition, the obligation to be just before being generous must be impressed on the conscience ; hence the child must be taught to give to another all to which he has a right, and that so far as he does so, it is justice, not benevolence, that prompts its conduct ; for an act of kindness implies something beyond what mere justice claims. Again, kindness to one must not be at the expense of another ; the claims of justice to all must be met before acts of generosity to any. In fact, an act loses its character as a benevolent one, if at the expense of another. Nor must the rightful claims of self be lost sight of. The child must be taught to say "No !" whenever its own character would suffer by yielding to the instinct to please others.

4. The growth of benevolent disposition depends on doing deeds of kindness. Precept is altogether powerless unless accompanied by action. In fact, without the deed of kindness, there is danger of mere sentimentalism usurping the place of active benevolence. Many occasions occur in school when the teacher may suggest kind deeds. He will find it easier to secure them when they involve activity. It is in little things that his judgment and tact may be most evinced—though nothing is little or trifling in education that tends to give a bias to the mind. Little things have the first claim, because they imply that the spirit of kindness pervades the conduct, and because they impress the children more than actions demanding apparently greater sacrifice. Setting a chair for a visitor, accommodating a schoolfellow with a place or a book, yielding at play known preferences to the wishes of others, contributing or collecting for known cases of distress, sending children to read to the aged in the neighbourhood, or to visit a sick schoolfellow, are the ways in which a teacher may incite to a life of kindness.

IV. **Humility.**—1. A right estimate of self, implying

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a proper sense of weakness, ignorance, and evil tendencies, is a favourable condition to intellectual advancement and moral growth. It is often found in schools that the want of it is productive of evils which interfere with the growth of habits of application, and consequently of intelligence and intellectual power; and there can be no doubt that it prevents that attention to feelings, principles, and practices, which is essential to the growth of a moral and religious character.

2. Humility is a condition of mind altogether due to experience, and to comparison of one's self, either with others or with some standard which it behoves us to reach. It is not therefore surprising that pertness, improper forwardness, or overweening confidence in themselves, should exhibit themselves in children. Indeed, such things must be expected until the means of comparison have been supplied, and such experience as will show them what they are, and what is becoming to their position. Conceit, indeed, implies more. Here there have been injudicious stimulants applied to the emotions of self, the result being not merely what flows from ignorance, but a condition of mind the very opposite of humility, and fruitful of all kinds of evil.

3. The means of promoting this disposition are evident. The more the opposite conditions are avoided, the greater will be the likelihood of a right estimate of self being obtained. The means employed must be considered in reference to the phases which the opposite condition may assume. (a) Among them must be placed the practice of exacting unquestioning and implicit obedience to commands. When children are allowed to question the reasons or right of an injunction, or to exercise at too early an age their own judgment as to their conduct, they become capricious and conceited; a high estimate of themselves, and a strong feeling of resistance to control, take the place of that natural feeling of dependence on those over them which is so essential a condition to their right moral training. (b) Discrimination in the use of praise and censure is essential in view of proper humility of mind. Praise, where the sense of duty and the consciousness of having done right should be sufficient, may produce conceit or a too high estimate of self. A teacher should not withhold approval where temptation has been

resisted, or some strong feeling of self overcome, and he should be careful to show that he approves right doing ; but it cannot be right to praise right doing as if there were great merit in it, or to speak as if the child were very much better than his fellows. Praise should be tempered with censure. (c) When dealing with conceit of intellect or attainments, the teacher's practice should be to hold up moral qualities as of higher moment than intellectual ones. He should place in offices of trust, not those distinguished for smartness, but those whose moral conduct is best. He will do well, too, to hold up as examples those illustrious names, whose owners, with fewer advantages than theirs, yet won for themselves a standard, which, it may be, his pupils give no promise of reaching. He may often, with benefit, speak of that all but boundless field of knowledge which others have cultivated, on which they have as yet scarcely entered, and which, labour as they might, they could not master in their lifetime. Nor should he forget to point out that now, and for many years to come, perhaps as long as they live, they will require all their ability to master what others have originated, discovered, or proved, and may never have power or opportunity to add anything to the stock of human knowledge. (d) Humility does not imply an abnegation of rights. One who voluntarily gives up right does not evince thereby his humility, but a low moral sense of the obligation which right places upon him. For one to be earnest for right, to himself or others, would be a hopeful pledge that humility would eventually become one of the graces of his own character.

## CHAPTER VI.

### TEMPER.

TEMPER is a result of educational processes. It is that quality of mind which enables it to resist, or causes it to yield to, the influence of feeling. It is the sum of the results of the various feelings which have contended for the mastery of the mind, and which have controlled the mind or been controlled by it. It is the power to resist feeling, or to control its expression. It is the suscepti-

bility to be moved or not, or easily, by feeling. It is thus a matter of will. Faults of temper spring from improper training of the will.

**I. Irresolution.**—This and inconstancy prevent progress. “Unstable as water, thou shalt not excel,” is corroborated by all experience. In dealing with young children in reference to this defect, it must be remembered that it springs as a necessary consequence from appealing at too early a period to the reason of a child to induce compliance with commands. The basis of a resolute, fixed, and determined temper must be laid by exacting prompt, unhesitating, unquestioning obedience from young children to every command. With older pupils recurrence must be had to the emotions of pursuit, and they must be accustomed to work steadily towards the attainment of some object, or the accomplishment of some definite purpose. They must be stimulated to resolve to do a given work in a fixed time, or, if the necessity exists, to pursue a course of conduct either to cure a fault or to establish a habit. Besides this the pupil must be made to understand the importance of a resolute, determined will. It must be made clear to him that to be ever changing his purposes is destructive to strength of character, is unfitting him for the serious work of life, is damaging to his sense of moral responsibility, and consequently hurtful to his moral life. He should be encouraged to form resolutions with a definite aim, but not until he has weighed all the circumstances and difficulties before him. When he has once resolved, nothing should deter him from carrying out his resolution.

**II. Impulsiveness, Hastiness, and Wilfulness.**—These have a common root. They spring from the habit of acting on the nearest motive—from present feeling, without weighing or considering other motives, feelings, or claims. These defects of temper are often sources of annoyance, pain, or trouble, both to their subjects and to others. In this fact must be sought the means of cure. Let the pupil suffer the results of his conduct, and when he is calm, let it be pointed out whence they spring. Let his attention be directed also to the effects of his conduct on others, and let shame and sorrow be excited on this ground. Let it be urged at such times that he ought not to act on the spur of the moment, but, distrusting himself, wait till he has ascertained whether other circumstances, now

perhaps forgotten, have not a stronger claim on him than his present feeling.

III. **Obstinacy.**—This is a fearful condition of temper, which is sometimes a source of great trouble in school. Not that it often occurs; for children being sent to school for a specific purpose, knowing that they cannot ultimately resist and remain at school, and going daily through a certain round of observances, which makes it seem natural to comply with their teacher's wishes, they become disposed to do what is required from them. Hence few cases of real obstinacy occur in school. Often that which is called so is not obstinacy, or only that in a temporary form, or for a special purpose. "Be careful," says Locke, "that it is obstinacy." Often an inaptitude for school lessons, or a natural obtuseness or weakness of attention from physical causes, or a perfect confusion of intellect produced by fear excited by bullying or blows, is mistaken for obstinacy. In the former cases, kindness, patience, much painstaking with the unfortunate child, are demanded from the teacher, who should be careful not to add anything to his already distressing condition; in the latter case, the command of his own temper, and sufficient pains to make clear his wishes, will be found to dissipate the condition. Occasional obstinacy, or refusal to obey, is the result of misgovernment. Unreasonable requirements, fault-finding in excess, irritating language and manner, produce a state in which the children lose all heart for work, or their own self-respect leads them to refuse obedience, which, if the governing is not mended, may lead to real obstinacy of temper. At other times a wicked boy may take up a defiant attitude, or one desirous of being a hero with his fellows may persist in a wrong course. In this case the teacher must enlist the sympathy of the children against the course taken, when the consequence will be that, the motive being removed, the boy will be subdued; in the former case there must be punishment, and, as far as practicable, separation from his fellows; or, if these fail, expulsion must remove the taint.

When real obstinacy of temper is found, the teacher must be careful lest he give it occasion to display itself. He must avoid everything, as far as he can, that would bring on a fit. If symptoms of such a condition coming on manifest themselves, he must be calm; there must not

appear the slightest distrust of himself, or of the lad's willingness to obey. If he can he should leave him to himself for awhile. It may be but a little sulkiness, noticing which would but strengthen the feeling, while leaving him to himself may cause better thoughts and feelings to return. But suppose the condition to come on. Is it the duty of the master to enter into a personal contest with the boy? must he punish, must he flog, till the boy yield? Is it to become a trial between the boy's endurance and the master's authority? Ought it to take this form? We think not. The master then employs an authority and assumes a responsibility which belong to parents only. If a boy refuse to obey, punish him for disobedience for that offence, and, if necessary, leave him in idleness until the time come round for the same lesson, or until the following day. Let him now be bidden to do what he had refused; if he again disobey, punish again, and keep him in idleness as before; and if on the next day he still refuse to return to duty, dismiss him to his parents. It has been said that a teacher cannot refuse a contest if it be forced upon him, for it is a question of the very existence of his authority, and therefore of his usefulness. This is doubtful; but, on the other hand, the law allows only a certain amount of chastisement by a schoolmaster, and, if this be insufficient to cure an obstinate boy, nothing but damage can accrue if the recommendation so often made be carried out,—“Chastise till the boy yields.” It is true that he cannot retain in his school one who disputes his authority, but let the fact be that he will not, and his authority cannot be weakened by his declining to inflict personal suffering until the boy yields.

**IV. Violence, Fretfulness, Peevishness, Querulousness.**—These defects of temper exhibit themselves more frequently in the playground than in the schoolroom. They will often come indirectly to the teacher's knowledge, or they may be brought by complaints from such as have suffered from their effects. They require to be dealt with discriminately. 1. Violence is often impulsive, and is by no means a sign of a bad temper; often its subject instantly expresses his regret at its manifestation, and would make any reparation within his power. Where it is not, the culprit should not be dealt with while under excitement; but when he is cool, and probably ashamed, the evils of his

want of control should be pointed out, and he should, if possible, be shamed into avoiding outbursts which lay up for him matters of regret, and which place him below the level of all around him—all having to exercise mutual forbearance. 2. Fretfulness and peevishness may have their source in physical ailment, and may often be alleviated by pure air, healthful exercise, and sportive games ; these being promotive of good humour and pleasant feeling. Fretfulness in very young children will disappear if their attention can be arrested by something else than that which produces the feeling. In the absence of other means, a smart tap on the arm is often a counter-irritant, and good humour is almost instantly resumed. Where peevishness is the normal state, cheerfulness in the teacher and cheerfulness around are conditions essential to its removal. The child so unhappily afflicted must be screened from provocation, and, if necessary, kept as far as may be from associating with its fellows. By this means he may be taught the value of self-control, and may be stimulated to watch over himself; freedom of intercourse being granted in proportion as he improves in the mastery of himself. Querulousness requires that the teacher should treat as of no moment the little annoyances that produce it. Instances of such as bear considerable pain without a murmur should be pointed out, and a little generous ridicule bestowed on himself for giving way on account of trifling pains. In such ways self-respect will be brought to his aid, and he will be ashamed to complain when he sees what many of his fellows often think it a point of honour to endure without a murmur.

## INTELLECTUAL EDUCATION.

### PART IV.—INTELLECTUAL EDUCATION.

#### CHAPTER I. PERIOD OF DEVELOPMENT.

##### *Section 1.—The General Character of the Period.*

THE school life of a child from the age of three to fourteen may be divided, in relation to the intelligence, into three periods—development, acquisition, and intellectual operations, or thought.

1. **The Infant Period**, ending at the age of seven, is that in which there is a progressive development of the mind. In this development the senses play a most important part. Certain faculties appear whose sphere lies altogether within their domain ; but other powers, whose full activity belongs to a much later period and in connection with other agencies, put in a rudimentary appearance. The law of the development is, that each step brings out a higher faculty, such development being possible only from what has preceded. In this development there are two factors, action on the mind through the senses, and action by the mind on the experiences thus obtained. The results are, a constantly growing power, or powers, in the mind itself, and a daily storing of the materials of knowledge.

2. The knowledge, which the mind obtains when brought face to face with the external world by means of the senses, consists of such things as colour, form, size, weight, distance, and other properties and relations of objects. Such knowledge is the result of the action and reaction of matter on mind, and mind on matter. The mind thus gets the power to note the qualities of objects and to mark off one object from another. To this act is applied the term perception, and to the power the perceptive faculty. The

process up to the appearance of this faculty is a growth in which there are two stages. The first stage is that of sensations, and all that is preliminary to them. The second stage is a more purely mental act, in which the mind looks off from its own consciousness to note those qualities in objects which had excited its sensations.

3. As the process of development goes on, the mind manifests a power to retain and combine the results of these states and operations. This is seen in ideas, which it forms, recalls, and combines into still more complex mental products. With these in store, and with a wider sphere of action on things, other powers appear, such as comparison, the discernment of likeness, and the discovery of relations.

### *Section 2.—Sensations.*

1. **Their Origin.**—Sensations are states of consciousness which have their origin in affections of afferent nerves. Impressions on these nerves are transmitted to the brain, and there the mind becomes conscious of them. Sensations have been divided into classes according to their definiteness, that is, according to the certainty with which they can be localized. For the fact is, that although it is in the brain that they come into consciousness, yet the mind does not refer them to the brain, but to the place where the impressions are first made. They have also been classed in relation to the mind. Under the former head we have three classes—general, muscular, and sensory; under the latter two—subjective and objective.

2. **Their Classes.** (a) *General Sensations* are such as arise from states of the body, or conditions of the blood. They are diffused sensations. They cannot be exactly localized, and the reason is, that many afferent nerves are affected. Fatigue, restlessness, and the state of comfort after a full meal are examples. They are essentially subjective. (b) *Muscular Sensations* arise on exertion of the muscles. In such exercise resistance is overcome, and this affects the afferent nerves in connection with the muscles, and there arises a sensation which is attributed, though somewhat vaguely, to a particular part. This muscular sense may be educated. Not only as seen in pushing, and in cases where there has to be a nice adaptation of the force exerted to the effect to be produced, as in bowling and

lawn tennis, but in those more delicate operations in which there is to be discrimination of weight or pressure. Persons accustomed to the handling of gold coins get the power of determining whether the coins are of the right weight, by simply poising on their fingers. The muscular sense gives us ideas of pressure, resistance, and weight. It does so by enabling us to direct our attention to four things—the degree of effort, the time it lasts, the space through which it is made, and the speed. The muscular sense forms an important element in the sensations of other organs. In object lessons, there should be such cultivation of the sense as will enable the child to distinguish muscular sensations from others. (c) *The sensory group* are those sensations which are connected with special organs. Their nerves are so localized that the mind can assign the impression to a definite part of the body. This group may be subdivided into three classes, taste and smell, touch, and sound and sight. There is one law relating to the sensations of this group that may help us to understand some of their complicated phenomena—as, for instance, erect vision. The sensation is always referred to the part where the impression is made, that is, the mind looks, as it were, along the nerve in the direction of the original impulse.

- 3. **Their Culture.**—These objective sensations, or sensations of the intellect, represent to us external conditions of being as soon as the mind has the power to interpret them. Attention to them becomes then an important element in education. (a) *Acute discernment* of impressions on the senses may depend partly on the native quality of the organ, but it is materially affected by the habit of attending to them. Those who accustom themselves to attend to a particular class of sensations become more alive to them, as in the case of a forester who discovers traces of footsteps and hears footfalls which are not in the least discernible by another standing near. (b) The *intensity* of sensations is much affected by the frequency with which they may have occurred. Thus a sound which jars the ears of one unaccustomed to it, is listened to with perfect composure by another. Hence much appears to depend on the previous condition of the organ, as in the painful impression produced by going from a dark room into a brilliantly lighted one. Such facts explain how it is that some impressions cease to excite attention. May they not account for the little heed

given in some schools to the voice of the master? A bell unheeded becomes a bell unheard. (c) *Attention to sensations* may be influenced in other ways. When the mind is occupied with one class of impressions, others may pass unnoticed. Thus when the mind is intensely absorbed by any pursuit, things which at other times give pain are not regarded. On the other hand the sensations may be so overpowering that no attention can be given to other matters. In this way severe corporal punishment may defeat its purpose. It is well also to note that the over-taxing an organ of sense may weaken it. (d) *The properties in objects* and the sensations which result from their action on mind must not be confounded. This is often done because the same term is frequently applied to both. They are totally dissimilar. Our sensations do not exist in the objects. Sound is a sensation having nothing like it in the atmosphere. Without a perceiving mind there would be vibrations, but not sound. The sensation of blue and the property in the object are not the same thing. All that we mean by blue is, that when light falls on the object, there is power to excite that particular sensation. All this it is important to remember in education, for in cases of disease, or defect of endowment, the sensation often alters its character, as in case of colour blindness, and inability to discriminate musical sounds.

### Section 3.—*The Senses.*

1. **Taste.**—*Taste* is essentially an animal sensation. It is the servant of the body rather than of the mind, and links us with the lower orders of existence; yet, when rightly cultivated, it may be made to counteract this sensual tendency. It has been said that only a man of culture can get the highest enjoyment out of a meal. (a) The *organ of taste* is the tongue, with help from the hinder part of the palate. Over the tongue are distributed different forms of papillæ, and in these are found the terminals of nerves. Some of these nerves are those of common sensation, and help in the proper office of taste by discerning the texture of substances, as rough, smooth, hard, and soft. Others are the glosso-pharyngeal and the gustatory, the former supplying the back of the tongue, the latter the front. This arrangement has a purpose.

All tastes are not possible at the same parts. A bitter taste is experienced when the substance touches the back of the tongue, an astringent at the front. Sweet and saline tastes are perceived both at the front and back, but with greater intensity at the back, when the substance is pressed against the palate. Acids are said to be best appreciated at the edge of the tongue. (b) In order to the sensations of taste it is necessary that the substance should be dissolved, and the intensity of the sensation depends on the largeness of the surface affected, and on the length of time the contact continues. (c) The sensations referred to taste are usually made up of those of taste proper, of touch, and of smell. That which we call flavour is probably a compound of the three. (d) That the sense of taste may be cultivated is evident from the experience of tea-tasters and wine connoisseurs. It has a wide range, as nearly every article capable of exciting it has a special characteristic by which it may be recognised.

2. Smell.—The sense of smell, though mainly animal, may be a means of adding to the stores of the mind, as seen in the discoveries of some eminent chemists. (a) *The organ of smell* is in the upper nasal chambers. The nerves distributed over these chambers are the olfactory nerves and branches of the fifth. Two kinds of sensation are thus possible, that of odour proper, and such a one as the stimulation produced by ammonia. (b) The *objects of smell* are gaseous or volatile bodies, the greater number of which being odorous. Olfactory particles brought into forcible contact with the olfactory membrane by means of air are the two things necessary to the action of the nerve. Each odour produces a specific sensation, so that many odours are distinguishable and may be retained as a standard of judgment. It is possible to distinguish the several odours of a mixed smell. (c) *The sense of smell is more objective than that of taste.* The sensation directs our attention to an object without us. As a sensation it takes some time to develop, but it lasts comparatively long. But, if the sniffing is repeated, the sensation soon disappears, the olfactory nerve being soon exhausted. (d) *The sensations are somewhat persistent*, hence they may be recalled by an effort. Mental associations congregate round scents. Some reflex actions are remarkable, many

persons feeling faint in the presence of the violet or musk. To test the power of discrimination, apply different odours at the same time to each nostril, and note the result.

3. **Touch.**—Tactile sensations originate in the contact of the surface of the body with outward objects. They are objective, as the mind by their aid forms ideas of the properties of objects. They are vague or definite according to the part affected. (a) The *vague* sensations proceeding from contact are nearly allied to those of common sensation. It is not easy to localize them, and they do not furnish the means of forming accurate ideas of the objects. (b) The *definite* sensations proceed from those parts which form the tactile organ. It is known that some parts of the skin are more sensitive to pressure than other parts, that the area of sensibility is smaller, and that the point or points of contact can be accurately discerned. These marks fix for us the organ of touch. For instance, the palmar surfaces of the fingers have the three. The nerves are more numerously distributed to them, so that more points are affected by contact, and the area of sensibility or "field of touch" is so small that two impressions in very close contiguity, as the points of a compass, will be discerned as two, while the mind fixes at once on the exact point of contact. (c) In *distinguishing* impressions on the tactile organ care must be taken not to confound those which arise from movement with those which arise from contact. In passing the fingers over a surface there will arise the two kinds, the former being muscular. The impression from contact is the pressure of the object on the skin, the muscular impression is that which arises from our pressure on the object. (d) *Nice discrimination* is affected by the degree of pressure. The intensity of the sensation is increased by pressure, but variety of sensation is lost. Where by a light touch two or more impressions may be discerned, by a heavier one they will be fused into one. A doctor wanting to know its exact force touches the pulse lightly. It is an easy matter to fuse sensations of touch by bringing the surface rapidly into contact. Thus if a string be made to vibrate at the rate of 1,500 a second, the vibrations cease to be distinguishable. Sensations of touch are affected by the condition of the surrounding areas, the sensations being increased by contrast with the part not under pressure. Thus when a finger

is dipped into mercury the pressure is most felt at the surface of the fluid, and if the finger be moved up and down, the sensation will be that of a ring passing along the finger. (e) The tactile organ enables us to ascertain the character of the surface, its temperature, and by combination with the muscular sense, the form, resistance, and pressure of bodies. The plurality of points of contact enable the organ to be educated, so that experts can tell by the "feel" of the thing what it is under observation, as in the discernment of textile fabrics.

4. **Hearing.**—(a) *Sound is the sensation which follows the stimulus of the auditory nerve.* It could be produced by direct stimulus of the nerve, as in the pressure which produces sounds in the head, but the usual stimulus is brought about by vibrations of the endolymph, brought about by vibrations of bodies external to the ear. All bodies are capable of sonorous vibrations, though not in the same degree. Hence the purpose or object of hearing is to put us in possession of the vibrating power of a body to interpret the vibration, to distinguish sounds, to tell the kind of body from which the vibrations come, and to retain the facts in idea. (b) *The organ of hearing* consists of a set of chambers and a subsidiary apparatus. The chambers are so placed as to secure from injury the very delicate and peripheral terminations of the auditory nerve. They are also so contrived as to admit of a multiplication of the terminal cells and fibres, and of their being spread over a comparatively large surface. By these means not only is the intensity of the sensation increased, but the power of distinguishing the many differences of sound is made possible. They have also parts which act as resonance chambers. (c) *Sounds are classified* in relation to quality, intensity, quantity, and pitch; and they are also sub-classed in relation to time, distinctness, purity, and articulateness; and they may also be viewed in relation to the acoustic properties of objects. (d) *The cultivation of the ear* requires attention to differences of sounds, the nature of that which gives forth the sound, the intensity of sound, and the direction and distance. (e) *Distinguishing sounds* is a mark of a cultivated ear. Some can tell at once the vibrating body; some can tell every bird of the wood by its peculiar note; some can in a concert single out a voice, loud or weak, and follow it. Thus a conductor

will not only detect a false note, but single out the offender. (f) *The intensity of sound* may also be an object of attention and discrimination. This, like other discriminative powers, depends on attention and on habit. When attention is concentrated in the act of listening, sounds so faint as at other times to pass unobserved will be instantly perceived ; while one who has been in the habit of attending to special sounds, as the striking of a distant clock or the footfall of a passer-by, will discern instances of them when bystanders have no consciousness of sound at all. (g) *The direction of sound* is a judgment based on several particulars, the intensity of the sound and acquaintance with that which produces it, and the position of the head at the time. The distance of a familiar sound is inferred from comparing its intensity with our recollections. It is a judgment based on experience. (h) *The culture of the ear* for articulate sounds ought to receive attention. This is a special power often possessed by those who have no musical sensibility at all. Delicate discrimination of articulate sounds is in some a natural endowment, but it is improvable in all. Children have their attention early arrested by speech, and the fact that they learn to imitate it shows that they have analyzed the sounds falling on their ear, and have discriminated between them.

5. *Sight.*—(a) *The organ of sight* is a complex instrument combining optical arrangements, moving forces, and a highly sensitive nervous surface. The optical arrangements have for their purpose the production of an inverted image exactly on the sensitive nervous surface at the back of the eye ; while the moving forces are intended to secure to the eyes the power of sweeping them in all directions. These moving forces are muscles attached to the exterior of the eye-ball. But besides these muscles there are others entering into the optical arrangements, as the ciliary and those forming the iris. (b) *The sensations* by means of this organ are consequently of two kinds, those originating at the nervous surface or retina, and those due to the muscles. The former sensations are classed as light, colour, and lustre. In their origin they are analogous to those of sound, the special sensation being due to the number of vibrations. Thus the difference between a dark and a light green is owing to the difference in the number of vibrations impinging on the retina in a given

time. The sensations arising from the muscles, together with those from the retina, and combined with others furnished by other senses, lead to a large class of judgments, involving those of visible movements, form, distance, size, volume, and situation. (c) *The objects of vision* are either self-luminous bodies or others reflecting light. In order to distinct vision the rays of light must form an inverted image exactly on the retina at the back of the eye; all surrounding objects appearing indistinct; hence the necessity of a means of adjusting according to the distance of the object. Objects of vision sending light into two eyes and making inverted images thereon, while the judgments are that the object is single and erect, have given rise to much speculation as to their cause. The former does not seem to differ from other cases, in which the mind recognises but one impression, though there are several. The latter also may be brought within the general law. Some think erect vision is a judgment, dependent on the movements of the hands, up and down, to this side and that, thus correcting that which would be suggested by the simple sensation. Others make it to depend on the muscular sensations attending the movements of the eye-balls. But the simplest solution is that which brings it under the general law that refers our sensations in the direction of the force acting on the nerve. A very simple diagram would make clear that under this law no other than the sensation of erect vision is possible. For light brings into action the "rods and cones" in order to excite the nervous surface of the retina. (d) *The materials* furnished by means of the eye to our knowledge are so many, varied and essential, that it rightly receives more attention in education than any other. Yet, though the most trusted, it is in many respects the least trustworthy of all the senses. This is owing to the fact that many of the things we attribute to it as simple sensations are really judgments based on many particulars, and on our past experience. This must be remembered when giving lessons on objects, or in those preliminary stages which form the beginning of all science. Care must be taken, not only that the judgments formed are in accordance with the facts, but that a habit is established of correcting the impressions of one sense by those of others.

*Section 4.—The Perceptive Faculty.*

1. The perceptive faculty is that which by means of sensations forms our knowledge of material things. The perceptions thus formed are often spoken of as simple or complex, intuitive or acquired. Such terms are misleading. Perceptions, as of single qualities, which are apparently simple are really complex, and consist in uniting present sensations with former perceptions, as when we perceive a surface to be flat, rough, or smooth. Perceptions are never really intuitive, that is, independent of experience. Complex perceptions, as the distinguishing of objects, may be regarded as the normal exercise of the faculty. In this case, distinct impressions are made on several organs of sense ; each resultant sensation is distinct, and might exist alone, but they are combined, and are all attributed to one object as their cause. How is this done ? The only answer is that the mind combines them and deems them to proceed from the same source. Hence our knowledge of an object is the result of the combined action of several senses. To rely on one sense is to expose ourselves not merely to imperfect knowledge, but to deception ; we ought, therefore, to correct the reports brought by any one of these agents by those of the others.

2. As all that we know of the material world is by the aid of the senses, and as all that we obtain in this way is necessary to the prosecution of physical science, the training of the senses becomes a necessity. In school such a training should be given as would give children the power and habit of observation. To each organ there should be presented the qualities fitted to cultivate it. This may be done by judiciously directed object lessons, in which experiment largely enters, with little talk, except in the way of clever questioning. Such lessons might be made much more effective for their special purpose by an attempt to stimulate the curiosity of the children. Name the object on which the lesson is to be given a day, or even an hour or two beforehand, and furnish opportunities to the children to examine it. As children like to have something to do, and also to tell what they have learnt, this plan gives them the opportunity of both ; and, in addition, enables the teacher to point out anything that may have escaped observation, which, done judiciously, tends to

sharpen their attention on the next occasion. Object lessons, however, are not the only, nor, indeed, the most effectual means of cultivating the perceptive faculty. Much may be done by surrounding the children in the school-room and play-ground with objects that will excite their curiosity. Much may be done by sending them into the lanes and fields with special objects of search, and by naming objects, as the street-lamp, for conversational lessons at a future time. Much may be done in other school lessons, as in form, colour, size, weight, and sound ; drawing and writing ; and first lessons on words and number.

#### *Section 5.—Representative Faculty.*

**Ideas.**—The next step which the mind takes is to fix its attention particularly on some of the qualities of an object, and combine them into a mental unity, termed an idea, which may henceforth serve as the representative of the object, and as such be recalled to the mind when that is no longer present. The association of this idea with a word may fix it more completely in the mind, and better enable it to recall it, but is not absolutely necessary to either result. The full process in this act of the mind is marked by the following steps :—An object is observed with close, earnest, and interested attention ; the mind then singles out particular features or properties, to which it directs its attention still more earnestly ; these it unites as belonging to one object, and by that act fixes them in the mind, in doing which it may have combined the action of several senses ; this unity, or idea, becomes the representative of the object, and may be vividly recalled when it is absent ; and in many cases, though not uniformly so, it becomes associated with a name which at once serves to designate the object and to recall the idea. The process now described is one of analysis and of synthesis—analysis, even in this, one of the earliest efforts of the mind, preceding synthesis. That this view is correct is strengthened by the following facts. Ideas are often vague and indistinct, and become accurate and truthful representatives of things only as familiarity increases, and observation becomes more minute and accurate. And of two persons observing the same thing, neither will carry away precisely the same idea as the other,

either because one has given attention to more points, or because each has referred the object to a different type, and thus has taken qualities which the other did not need. How different, for instance, the ideas of the sea formed by a child, a poet, a painter, and a sailor !

*Section 6.—Implicit Judgment.*

**Resemblance and Relation.**—The power to form ideas, and to hold them before the mind, prepares it to identify like qualities amongst external things. Some object now under inspection by the senses suggests the idea of some other object, dissimilar in many points, but having like qualities with this ; this is succeeded by a flash of identification, and a feeling of pleasant surprise in finding, under another form, that which was already familiar. The same power of holding ideas before the mind helps it to observe the relations which are found among the objects around. Thus the relations of number and of space enter the mind, the relations among the simpler geometrical forms, and at length the identification of these in common objects. Such exercises of the intelligence are but rudimentary operations of the higher faculties of the mind, and during the period of development are but indications of the insufficiency of what lies on the surface to satisfy its cravings, and of the coming of a period when it will penetrate the phenomena to discover the laws which lie beneath. The opportunities which present themselves in the early period of life, during other lessons, to bring these embryo faculties into play, will stimulate a keener observation, and, as language grows, and more is attempted, will prepare for the higher exercise of the understanding when the time comes. The means are in tracing a common quality, as elasticity, in a variety of objects ; the relations of number, as far as these may be presented in the concrete ; and the discovery of such forms as the circle, sphere, cube, cylinder, cone, and prism, in common objects.

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## CHAPTER II.

### PERIOD OF ACQUISITION.

The Junior Period of school life embraces from the age of seven to that of eleven. It is a period in which material is stored for a higher development of the mind at a later time. It is a period also in which a higher discipline may be secured to the powers that have been in process of development than was possible before the brain was complete or language at command. During the whole of the previous time the language faculty has been developing, and now the child enters on a culture in which language will form a very important instrument. The period is to be a gathering and a storing time—in which the mind has to be filled as well as disciplined.

#### Section 1.—*The Language Faculty.*

The second great period in child-life is marked by a marvellous growth of language, by activity of the senses, and by the power of memory. During the period of development the child grows in power of utterance, and in knowledge of words, and has been aided by these in those rudimentary exercises of mind above indicated; but a time comes when this process is much expedited and the child goes on adding words and forms of speech to its previous accumulations, without at all, in many cases, realizing their significance and power. And not only words, but facts, the import of which cannot be understood, are added to the mental stores. *Verbal acquisitions* include much that is merely mechanical—as in articulation and flow of utterance, or fluency,—but also others that imply a mental element—that of memory. *Good articulation* implies the possession of an ear for articulate sounds, a power to retain trains of sounds, and flexibility of the organs of utterance. Where these are natural gifts, the growth is rapid; yet much may be done where the innate aptness is small. For instance, the power to discriminate articulate sounds, and the retention of trains of sounds, may be strengthened by attention, quiet, and

practice ; and distinctness of utterance may be promoted by throwing more force into it. *Fluency* is a mysterious acquirement, whether regard is given to the stock of words, their coming at command, or their uninterrupted flow. The ultimate explanation of these facts lies probably in physiological conditions ; but yet much depends on the will, the attention, the energy thrown into the work, the recovery of trains of utterance, and repetition. The acquisition of the *power to read*, or to commit to memory by reading, involves other elements. In the former case there are the three stages of learning, fluency, and intelligence. There is first the recognition by the eye of the arbitrary signs of language—words, which depends on its power to seize and keep the points of difference between them and others :—more than this is not required, unless the words have to be written from memory. Next comes the association of the sound with the sign ; to do which it is necessary to fix the eye on the latter during the utterance of the former. When the utterance is aloud, the agglutination is sooner effected ; but it will go on with a whispered utterance, and even with an ideal one. Hence the importance of children following with their eye, and giving their attention during the reading of their teachers and others. Fluent reading implies recognition by the eye, the remembrance of sounds, and the utterance of the words in a continued flow—this implying considerable power over the organs of speech. The conditions necessary to this attainment are will, pleasure in the exercise, energy, attention, repetition, and varied practice. Reading with intelligence, while embodying a higher element, requires the mechanical one of cadence or accent. This is a quality depending on new conditions of voice and ear. The action of the voice is not the same as for articulate sounds, and the quality of ear is distinct both from the musical and articulate. The acquisition goes on best where the learner has good models ; hence the teacher should cultivate the power in himself, and often exhibit it for imitation by his pupils.

#### Section 2.—*Culture of the Senses.*

The Culture of the Senses, though the special aim of the infant period, does not exclusively belong to it. In fact, at no stage of the child's progress can their aid be dispensed

with. In the first stages of all school subjects their help is necessary. By beginning such instruction with words and symbols, definitions and rules, its matter is seen only in fog and shadow, and the pupil never gets that grasp of it which is necessary to its permanent retention, and to its becoming a basis and a means of other culture. The principle which should guide the teacher in all elementary subjects, is to present them first in the concrete, so that the superstructure may be reared on a basis of clear perceptions. In other subjects, as geography, or those included under the phrase "common things," if the matter is to be intelligible and disciplinary, it can only be by a right employment of the senses. Such lessons are of value when they lead children through processes of observation and reflection to the discovery of natural laws. As just hinted, this culture of the senses proceeds on the principle that ideas are to be given before words, and things examined and processes acquired before rules or definitions are given, or principles enunciated or established. This is a very important principle, but not to be strained too far. For, as a matter of fact, children acquire many things—words especially—to which they can attach no significance. And this cannot be prevented, nor is it desirable that it should. Childhood is a gathering and storing time, in which things are laid up for future use. In fact, some intellectual operations require, as an essential condition, that there should be a store of things in the mind whose significance could not be understood before. Language, as the storehouse of all human thought and progress, thus exists, and its acquisition is to be promoted, although it is impossible that what it records can be spread out before the mind previous thereto. But these stores are not, as they accumulate, to be unemployed. In fact, they furnish the means for a higher culture, of perception, conception, and sense of relation, than was heretofore possible, and these prepare the way for the imaginative faculty, and all for the thinking processes of the future.

Words may be often turned to practical account for the improvement of the power of observation. Object lessons, judiciously given, will often bring out from the learner descriptive words whose significance he has not acquired, —the object being present, the quality which it represents

is pointed out, and thus the word becomes a power to discern the quality in other things. Nay, sometimes, where the objects are not accessible at the time, a word may be elicited, or even given, and the object named in which the quality is found, the pupil being directed to discover the quality when next he sees the object. Words thus become, as it were, "antennæ to the mind,"—means of discovering qualities which, without their aid, would pass unobserved.

### Section 3.—Memory.

1. All manifestations of mind, on the side of the intellect, from the first dawn of intelligence, imply a power to retain the materials of that intelligence. It is the presence of such a power that accounts for the facts of mental growth. Take any of the first acquisitions of infancy, as the physical one of stretching out the hand for an object ; or the emotional one, the glee which meets the smile on the mother's face ; or the more intellectual one, the pointing to the father on hearing the familiar name ; and it is evident that there has been a recovered mental experience before the outward act could take place. This is memory. It implies a threefold element :—the *retention* of ideas, thoughts, and other mental products and forms of consciousness ; their *revival* or *reproduction* in the absence of the objects which originally gave them birth ; and their *recognition* as former objects of consciousness. The last is an act of judgment which is essential to the completion of an act of memory.

2. The Qualities of a Good Memory are accuracy in acquiring, tenacity in retaining, and readiness and faithfulness in reproducing. These qualities depend partly on the mind and partly on the brain—but how far they are to be allotted to one or the other has not yet been made out. That no mental acquisition is ever entirely lost may be due to the mind itself ; but that matters decay from the memory, that there are differences in its strength, and that diversities exist in retaining different subjects, are due probably to the brain. The process in the brain is a revival of those movements which took place when the acquisition was made. A fact that receives some illustration from the experience in the recollection of a nauseous draught ; or from the tendency to a subdued utterance in mentally recalling a piece of poetry.

3. Memory is either spontaneous or intentional ; the former is remembrance, the latter recollection. The one recurs without effort through the force of association, the other implies an effort of the will. (a) The retention or permanence of mental acquisitions is affected by several things. Of these the *quality* of the mind is a fact of some importance. A mind naturally vigorous will hold its knowledge tenaciously. The *interest* taken in the subject is a favourable condition. The *attention* given is a very important element, so much so that varieties of memory are probably due to differences in the force of attention. The *clearness and reality* with which the mind grasps the subject are also necessary elements in the permanent retention of it. This fact has got expression in the saw, "Let nothing enter the memory but through the intelligence." *Repetition* accounts for much. Often in the absence of other conditions, this is sufficient to make the memory retentive of what is committed to it. The *mode* of acquiring and the *time* given affect the permanence of some acquisitions. For instance, in "cram," matters so acquired quickly decay ; partly because they are not long enough before the mind to fix themselves, and partly from the reaction which follows the unusual effort, in which the mind is little disposed to exert itself to make them permanent. The *age* is important ; attainments made in youth are retained when those of a later period fade away. (b) The *reproduction* of knowledge is due to association. When ideas or thoughts are suggested one by another, they are said to be associated. These associations are formed according to fixed laws, in a variety of ways. They have been reduced to two great classes, *contiguity* and *similarity*. (1.) *Contiguity*.—Whenever actions, thoughts, or feelings are experienced together or in close succession, the recurrence of one is usually followed by the others. This is the law of contiguity. Some of the associations under this law are *necessary*, being founded on affinities in nature, or in the constitution of the mind itself ; others are *accidental*, other associations than those made being conceivable or possible ; and others are *voluntary*, being selected from other possible ones. Of necessary association in which the conception of one thing involves that of another may be instanced, father and child, good and evil, pleasure and pain. These must at

first be held together in the mind, and when one occurs the other usually succeeds. Things having invariably the same sequence suggest each other. This sequence may be *natural*, as physical causes and effects, or *artificial*, as the learning of the multiplication table. Things associated in place, whether naturally, by accident, or by design, are found to be highly suggestive of each other. On this fact is founded the *artificial* system of association termed *topical*. (2) *The law of similarity* is the tendency which ideas, thoughts, and feelings now in the mind have to suggest others resembling them in previous acquisitions. It is the foundation of science. By its operation, identity is found amidst diversity, and resemblances where they were not looked for. It enables the mind to discover analogies, to make classifications, and to form generalizations. By its means processes of induction and deduction are made possible. The law of similarity is much influenced in its operation by the habits of the individual mind, and by the richness and variety of its mental furniture.

4. **The Culture of Memory** requires attention to the following points :—exercise and trust it ; secure attention and interest when making an acquisition ; let the things learnt enter the intelligence with clearness and force ; give sufficient time to the acquisition—cram is never permanent ; secure frequent opportunities of review ; produce often, in writing, both literally and a free but full rendering of the matter. In new subjects the elementary facts should be firmly inlaid. Avoid fostering a merely verbal memory. Let words and ideas be indissolubly joined. The practice of requiring ideas only may be attended with evil. The learner is limited in his choice of words, he finds difficulty in expressing himself, his stock of words grows slowly, and without words, ideas fade. Words record thoughts and treasure them up for future use. But do not burden the memory with words only. Do not strengthen the memory at the expense of the judgment.

#### *Section 4.—The Conceptive Faculty.*

1. **The Possession of Ideas** and language opens another sphere for mental activity. In its first phase this activity differs very little from that operation in which the

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mind forms its idea of a present object, except that it now takes a wider range. An instance may be found in the notion formed of an individual, not from what he appears on a single occasion, but from all the circumstances or times in which we have observed him ; or one may be seen in the picture which springs into the mind of a wanderer, when he hears the word home. But the process is materially modified when language and not observation is the instrument of this activity, as in the case of forming a picture in the mind on reading a description. To this power of the mind is applied the term *conceptive faculty*, and to its products the term *conceptions*. It is true that these terms are not rigidly confined to this sphere ; but if their present limitation is clearly held in view, it will be seen that a very definite field of mental activity and culture is included under them.

2. **The Conceptive Faculty**, out of materials already possessed, constructs images or scenes, which, though not exactly like the reality, yet are sufficiently so as to be recognised as fair representations. As in the instances often quoted of Milton, where his descriptions are said to be so real that they might have been written on the spot, though it is certain that he was never there. Such conceptions of the mind must not be confounded with those mental products termed *concepts*. A conception is formed by combining qualities found in one object, features of one scene, or elements in one character, and has always a basis of reality in some place, person, thing or event. A concept combines like qualities from many objects, and is not a representative of an individual reality, but of a mental combination.

3. **The Cultivation of this Faculty** may be conducted either through observation or language. (a) Lessons with a wider range than that offered in the ordinary object lesson, and embracing natural history and elementary science, will be found fruitful. The structure, habits, and habitats of animals, and the adaptations which are found of one to the other, furnish good material. So do the facts of elementary science, when the purpose is restricted to a clear conception of such facts rather than of the laws which underlie them ; though these also are admissible, when they are not very recondite, as in some of the more obvious natural phenomena (b) The *conceptive faculty*

will find its chief sphere in elementary training in connection with language and books—especially in all such as deal in descriptions of persons, events, things, and places. Such cultivation may embrace single things, as represented by words, or scenes as presented in description. In building up ideas in the mind, which a word already known is to recall, if the object can be presented for examination, that will be the best way by which to connect a clear idea with the word. But in many cases the object cannot be presented, and then the word can become significant only by description. In this case the process of constructing the conception is not very dissimilar from the other ; the difference is, in the one case the mind works with impressions made on the senses by the objects themselves, but in the other with ideas recalled by words. Of course in this case the ideas must be familiar. Let a description of an unknown object be before the mind, the only possible way of forming a conception of it at all resembling the reality, is for each part of the description to recall some familiar idea, which the mind takes and combines so as to form the conception of the new object. Let a botanist, for example, have before him a description of a newly-discovered plant ; his conception of it will be fairly accurate, because each part of the description presents him with a familiar idea, and all that he has to do is to construct the new conception out of the familiar elements. A person unacquainted with plants would find this impossible. Whether single objects or scenes have to be conceived from description, the best way is to refer the learners to some type—or, by the mode of presenting the matter, enable them to form a type in the mind—which, by stripping and enlarging, will enable them to place distinctly in their minds the new idea it is desired they should form. Other culture may be secured to theceptive faculty by graphic descriptions of far-off lands, by vivid delineations of scenes from life, by pictures of the homes and habits of the people of other lands or times, and by descriptive reading both of prose and poetry.

**4. Sense of Relation.**—Language gives the power of holding ideas more distinctly before the mind, increases the power of the child to recognise similarity and relations, and to discern analogies : hence, long before there can be that use of language which belongs to the under-

standing proper, it may be made to yield what will enrich the mind and aid its progress to that higher state for which all preceding states are preparing it. Opportunities for this culture may be found in moral lessons, where the fable and the proverb are the means employed ; in religious instruction, by employing the emblem and the parable ; in lessons in natural history, where such points are brought out as the industry of the bee, the prudence of the ant, and the sagacity of the dog ; in dealing with words having a twofold signification—a literal and figurative ; and so on.

### *Section 5.—Imagination.*

The Activity of the Conceptive Faculty leads up to the higher efforts of the imagination. Under one aspect the conceptive faculty is but the imagination in a lower sphere ; but the work usually assigned to the imagination is a distinct advance in its nature and especially in its results. It is constructive and creative. It constructs new things out of old materials, or new combinations of old factors. It gives birth to fancy, wit, humour, feeling of beauty, and all the æsthetic emotions. It has a wide range in art, science, ethics, and even in the employments of mechanics. In school work there is much room for its use—in the constructive if not in the creative form. To many subjects it must furnish the law of their methods, if they are to yield any results at all ; and in some subjects, such even as reading, arithmetic, and grammar, the highest gains cannot be obtained unless free scope be given to its exercise. The importance of recognising this constructive element has been often acknowledged—especially since the time of the Edgeworths. The exercises recommended by them formed a part of the ordinary work of infants' schools, from their first establishment. They have become more generally known, though not more extensively adopted, since their appearance under the new name of Kinder-Garten work. But the presence and potency of the faculty should be recognised in all the stages of school training and in relation to all school subjects.

## CHAPTER III.

## PERIOD OF THOUGHT, OR OF INTELLECTUAL OPERATIONS.

The Senior Period of school life, commencing about the age of eleven, is one for which all that has preceded has been but a preparation. It has grown into a maxim that intellectual power is of more importance to the pupil, than a mass of miscellaneous knowledge. The previous work of the school, then, must not be regarded as the end, but as a means, as but preparatory to a higher discipline—a discipline which, through the operations of the mind on what it has in store, fixes in a definite form, for definite use, the elements of knowledge, which gives power of connected thought, and which aims to produce *clear-headedness*. These higher operations are those of the understanding and reason, — the former dealing with concepts, terms, and propositions ; the latter with the processes employed for the discovery of truth.

*Section 1.—Judgment.*

1. The Judgment is that faculty of the mind which decides upon the relations existing among things, or among its own notions. The term is also applied to the act of the mind in which it decides that a relation does or does not exist, in which one thing is affirmed or denied of another. It is also applied to the expression of such a decision in a proposition ; but this should be carefully distinguished from that, as the former may take place without the latter. The term is taken from a Court of Justice, where a judge examines, compares, weighs, and then decides. The analogy is correct. The mind before judging critically examines and compares, and then its decision is given—or suspended for further knowledge.

2. Judgment is a Distinct Faculty of the mind, and as such is the source of mental furnishings, which could not exist if it did not. It is a faculty that requires the exercise of other powers before it can be brought into use; yet it makes its appearance early, for in its rudimentary

exercise it is necessary to the existence of many mental products. It grows. At first it is an implicit, unexpressed, unconscious act ; as in perception, in the forming of ideas, in the recognition of likeness, and in the confidence reposed in memory. Then it becomes more explicit ; as in the forming of concepts, in the processes of division, and in definition. In forming concepts we have comparison, identification of likeness, rejection of unlikeness, and the mental product. In division there is judgment, for it is one thing to cut up scientifically, and another to hack to pieces. In definition we approach to formal judgment. At length we have the formal act, when we designedly compare notions to predicate one of the other, or to deny their relation ; or, when we examine a proposition to decide whether it is true or false.

*Sect. n 2.—Concepts.*

1. Attention has been already directed to the early appearance of the sense of resemblance and of relation, and to the influence of the identifying principle in early education. Now a time has come, made possible by the possession of knowledge and language, for its culture in its highest form. The subject will require a glance at the nature of concepts and of the mental processes in forming them.

2. A Concept is a mental unity in which there is held together a number of particulars or marks, found in a variety of objects, which, resembling each other in these particulars, differ in others. In forming them the mind selects out of its stores those ideas which have certain resemblances ; it fixes its attention on these to the neglect of the differences, and forms them into a unity in thought, a notion which shall henceforth stand as the representative, not of any individual thing like an idea, but of everything that possesses these points of resemblance, and so far only as it possesses them. Hence a concept, or notion, exists only in thought, and there is not anything which is its exact antitype in nature. But not only is a concept a mental unity holding in it several particulars ; it may consist of one mark only, gathered from a number of individual objects : in this case it is often termed an abstract idea. In forming concepts, the mind performs at least three operations, comparison, abstraction, and generalization.

(a) **Comparison**.—This is the act of placing two or more things together for the purpose of marking their resemblances. It implies diversity and contrast in the objects, for the identification of perfectly similar objects is an intuition. In some of the preceding stages this operation has been implied,—wherever, in fact, the identification of resemblance has taken place. But for the purposes of the higher culture it must be a voluntary and properly directed act. Its field lies in a progressive series; in the likeness of wholes to wholes, in the discernment of a common quality amongst diverse objects, in the identification of geometrical forms in common objects, in the discernment of analogies and of ratio, and of the relations of cause and effect.

(b) **Abstraction** is the power of singling out a part or a quality of a thing, and making it the object of attention. Thus, in forming a concept, the several common marks are drawn off and held apart for comparison; in which process there are these four distinct acts:—there is a perception of difference among the qualities in the concrete individual; there is an act of analysis setting apart one or more qualities for attention; there is an act of comparison, in which identity with qualities in other things is established; and there is a mental result—a unity in thought.

(c) **Generalization** is the complement of this process. It consists in bringing into a class all the objects to which this unity in thought may be equally applied, and in connecting the notion or concept with a term that shall henceforth designate each object of the class exactly in the same sense. The things compared, however diverse, are held together by the identifying principle, and the common name or term.

### *Section 3.—Language.—Terms.*

1. Language accumulates and embodies the material of knowledge gathered by successive generations. It thus makes thinking possible, as it enables the mind to bring together for comparison many things which could not otherwise be held in view. This is done by descriptive and analogical language, but chiefly by abstract or general terms. Terms unite in a common bond what belong to many and various things. They thus represent concepts. Terms are classed as concrete and abstract.

2. Concrete Terms relate to material things. In their

case, the things being at hand, there is the opportunity of fixing the meaning of the term. Such terms are intended to include all that is common to a class of objects. But as all these marks are not known to every person it follows that the signification of a term in any given instance is what the individual makes it, that is, it depends on his knowledge. Hence it follows that clear thinking, valid reasoning, and freedom from misapprehension depend on acquaintance with the meaning of the terms employed.

3. **Abstract Terms** are simple or complex. A simple term sets one quality before the mind, a complex term embraces several qualities. Abstract terms represent purely intellectual products. There are no things existing to which we may refer for the marks of the concepts. For though in some cases the marks may have been gathered from actual experience, yet the experiences are not permanent; and the notions might be, if the experiences had not been. Such are the notions embodied in justice, conscience, protection, and circle. These form two classes, mathematical and moral.

4. **Mathematical Terms** represent notions, not things. They have no real counterparts out of the mind. They represent pure conceptions of the intellect. A circle exists nowhere but as a conception in the mind of him who forms it. Such notions are exact. They include certain definite particulars, and the term represents these invariably. But though such notions do not represent real existences, many of them can be represented so as to aid the mind in forming the conception. Thus, a circle or a square may be represented by a diagram which is neither a circle nor a square, but may be used as if it was. The signification of such terms, then, may be exactly acquired, and once acquired they may be used without any misapprehension. **Moral** terms may be taken as representing all other abstract terms. Most of them are very complex in their signification. They are very difficult to grasp, as they can be set forth only by other words, whose signification may be alike uncertain. Hence they are a fruitful source of misapprehension.

5. In the Progress of Child-Mind, terms are often acquired before the concepts for which they stand. If the term is one that applies to a number of concrete things, the process is often thus:—the term falls on the ear, and is known as a sound; then as the name of an individual thing;

then as applicable to other things in a common sense, the meaning attached to it becoming enlarged or limited as experience grows. Moral terms are learnt much in the same way, only that their import becomes dimly apparent from the occasions when used. Still many terms are held by children without their concepts, and in those cases where a meaning is attached, it is loose and indefinite. Means, then, have to be taken by which terms may become significant and definite. The processes by which they do so are those already spoken of,—comparison, abstraction, and generalization; but there are two devices by which this process may be expedited: they are division and definition; a two-fold operation growing out of the twofold power of a general term, in conducting which the teacher must reverse the ordinary process, and divide before he defines.

(a) **Division** is the separation of a whole (genus) into its parts (species). A concept, as represented by a general term, contains under it subordinate notions or concepts, which are called its parts; *e.g.*, the concept represented by the term animal has under it the subordinate concepts represented by the terms man, brute. The higher concept is a genus, the inferior ones species. When the parts or species are enumerated, there is the process termed division. In other words, division gives the classes and sub-classes included under a general term. It is effected by the aid of the specific differences. When employed by the teacher, it is that the pupil may gather out clearly what is comprehended under a general term, of which he has to learn not only what it denotes, but in what sense it is applied. Division is, therefore, for the learner, what the examination of the things was to the first framer of the concept; and it enables the teacher to place out, as each sub-class comes into view, what is possessed in common with preceding classes, and what is peculiar to itself, thus defining each term as it occurs.

(b) **Definition** declares, therefore, the precise meaning of a word. It sets forth the notion under the term so distinctly that there may be no ambiguity in its use. A definition sets forth the general nature, or those attributes which are common, and it sets forth the distinguishing quality; in other words, it sets forth in what a term agrees with other terms, and in what it differs from them. The law is, to give the proximate genus and the peculiar difference; the proximate genus because it includes the rest, *e.g.*, wine

is a juice, not wine is a liquid. From this it follows that a definition is not at its right time unless the materials from which it may be formed are in the mind.

6. **Proposition.**—A proposition declares the relation between two concepts or terms. This relation is discerned and decided on by the judgment, the cultivation of which, and of the power of inference and of formal reasoning, is the point for which all preceding culture has been preparing. The means are at hand in the matter of reading lessons, in grammar, in composition, in arithmetic, and in oral lessons with these as specific aims.

7. **Appropriate culture** may be supplied to the understanding by careful exposition of reading lessons, by right instruction in grammar and composition, by explaining the grounds of arithmetical processes after facility has been acquired, by lessons in geometry, by lessons on common things, so conducted as to lead to the discovery or setting forth of natural laws, and by a more systematic study of one or two subjects, as physiology or botany.

#### *Section 4.—The Reason.*

All educational processes, on the side of the intellect, aim to bring the mind into that condition in which the knowledge or discovery of truth becomes its prime object; to put it in possession of the modes by which truth is attained—induction with its associated operations, and reflection; to give it the power of continuing these operations—operations involving connected and often long-continued thought; and also to accustom it to the ways by which truth is advanced or established—deduction and demonstration.

There are a higher and a lower exercise of the understanding and reason. The higher exercise belongs to the gifted and mature mind, and consists in working on things, enlarging the boundaries of science, and preparing treasures of truth for the use of others. The lower exercise belongs to the many, and consists in mastering, through language and other aids, what others have done; *e. g.*, few—now and then one, far apart—can be original mathematicians, but many can acquire what these have created. One here and there might think out a proposition in geometry,

where a thousand could go through the train of thought when laid before them. Hence the folly of conceit in such, who, whatever their learning, have but made themselves masters of what others have thought.

The work of the school is to use *what is* as a discipline of the mind. Only a very minute portion of achieved results can be mastered by lads who remain even to the latest point of school life ; but something may be done to give their minds that tone which right methods and objects of study impart. The power to apprehend distinctly, to retain and convey clearly, to weigh carefully, to examine well before coming to a conclusion, to trace principles in instances, and to love truth for its own sake, are objects which should never be absent from the teacher's mind. His means must be found in the common school-work.

## PART V.—ÆSTHETIC CULTURE.

1. THE mind in looking out upon nature, not only takes cognizance of its material properties, but has strong pleasurable emotion in the beauty of the scene around it. Let proper objects be presented, and the mind as readily apprehends beauty as it does physical properties. This power of the mind, whose objects are beauty, grandeur, and sublimity, is termed the æsthetic faculty. The feeling of pleasurable emotion, which constitutes its characteristic, is excited by many and very various things, and it is not excited through the senses only. But many things have the power of awakening agreeable feelings which do not belong to the æsthetic class. An object that does belong to it must excite pleasurable emotion, must not be associated with anything disagreeable or disgusting, and must not be the cause of exclusive enjoyment. Food may be taken as an object out of the class. Its purpose is the sustenance of the body. Some of its associations are sufficiently loathsome, and the same morsel can give pleasure but to one individual. Objects in the class are, an extended and varied landscape, a glowing sunset, the song of the lark, the laughing rill, and such like. The pleasure excited by these is unalloyed, and forms no monopoly. Enjoyment in common rather adds to the pleasure than diminishes it.

2. The growth of æsthetic sensibility may be taken as an established fact. There is original sensibility, as shown by the delight with which a child gazes on colours, or on a brilliant light. There is also acquired, for it cannot be doubted that an educated æsthetic mind has more sources of gratification in the contemplation of beautiful objects than an untutored one. There are some minds which have no awakenings where others have ecstatic pleasure. In some cases, this may proceed from the one

mind being richly endowed with æsthetic sensibility, while the other is comparatively destitute ; but in most cases, it probably is due to education and the accident of position having opened sources to the one, which their absence has closed to the other.

3. Of the senses, the ear and the eye are the chief avenues by which æsthetic influences reach the mind. Now, it is observable that a powerful influence is exerted upon an individual by his surroundings. It is well known that children dwelling in an atmosphere of song, earlier develop a taste for music than others in less favourable circumstances. So with the eye. Accustomed to dwell on beautiful objects, its gratifications come earlier, and its power of discrimination is greater. But there is an important fact on the opposite side. An eye accustomed to the absence of beauty never feels its loss. It may by use not only become indifferent to its absence, but also to the presence of dirt, litter, and deformity. "Freshness and vitality," says Morell, "are imparted to the organs of sense by presenting to them fresh and natural objects. An eye accustomed to dirt, squalor, and deformity gets dull and heavy ; while the beauties of nature stimulate the very power of the sense itself. So an ear dimmed by noise and confusion gets insensible to all the finer harmonies of nature or of music. The practical lesson we should learn is that we ought, if possible, to surround childhood with decency, cleanliness, propriety, and with beauty, whether of nature or art."

## BOOK II.

# SCHOOL MANAGEMENT.

### CHAPTER I.

#### SCHOOL SYSTEMS.

PRIOR to the introduction of our present system of elementary schools the instruction was mainly individual. This was so in the public and grammar schools as well as in the parochial schools for the poor, of which more than four thousand had been established before the close of the eighteenth century. Class instruction, and, consequently, improved methods of teaching and management were introduced with the monitorial system.

**I. The Monitorial System.**—This system appeared at the end of the eighteenth century in the two forms which subsequently developed into the National and British Schools systems.

**. I. Dr. Bell's, or the Madras System.**—Dr. Bell established schools in Madras in which he was compelled by circumstances to employ monitors. For ten years prior to his return to England in 1797, he worked out his scheme. In that and following years he succeeded in introducing his plans into many of the parochial schools, and at length had the satisfaction to see them adopted by the National Society, established in the year 1811. Bell's aim was to turn out good scholars, good citizens, and good Christians. For its accomplishment he depended on his methods of teaching, modes of discipline, and school organization. The area of instruction was not large. It comprised reading in the Bible, writing, arithmetic, and religious know-

ledge. But the teaching was to be definite, in limited portions, and thorough. The main feature of the system was that the master, in all his relations to the school, was to act vicariously. All the teachers were selected from among the boys themselves ; and the school was managed also through the agency of boys. In reading he had, at first, a plan of mutual instruction, in which a boy of a higher stage helped another in the preparation of his lesson. Then the boys thus assisted were grouped in a class for examination and repetition. A similar plan was pursued in teaching the Catechism and the Tables ; writing and arithmetic were taught on the individual method. Later on, this plan was displaced by class instruction, each class being under the care of a monitor and assistant. The managing staff consisted of examiners and ushers. Each examiner had charge of two or three classes, which he visited in turn, stimulating the monitor, and passing forward the proficient. The ushers were charged with order, the supply of books, slates, and other things in use. The head usher was a sort of general superintendent, who conducted the drill and changes, and was the medium of communication between the staff and the master. This elaborate system gave employment to the leading boys, and enabled the master to appear in the direct management but seldom, and then—it was thought—with greater effect. The classes were large, and were arranged in hollow squares, facing a platform commanding the whole, from which all orders were issued.

**2. Lancaster's, or British System.**—Joseph Lancaster opened a school in Southwark in 1798, and introduced into it the monitorial system. An actual worker in school, he was enabled to carry out more successfully the principles he had adopted. He thus designed systematic lessons in spelling and reading for the lower classes, so that in the higher there might be nothing to hinder the application of the power gained to its legitimate purpose. He also grouped the children in drafts of ten or twelve to secure to each sufficient practice and individual attention. He had arithmetic taught in classes, and that it might be with the greatest success, through the school at the same time. The Bible was the reading-book in the highest classes, and catechisms were discarded. The teaching and managing staff differed from Bell's only in name. The

schoolroom had desks in parallel rows facing the platform, with draft spaces round the room. Lancaster's great success, and his enthusiastic advocacy of the claims of the poor to be educated, led to the formation, in 1807, of the British and Foreign School Society.

3. **Wood's, or the Intellectual System.**—The monitorial system spread into Scotland. There it met a popular sentiment in favour of a much higher culture than was found in the south. The mechanical drill and the abstention of the master did not satisfy the notions of the friends of education there. The initiation of a better system was due to Sheriff Wood about the year 1819, and its extension to the advocacy of Dr. Andrew Thomson and Professor Pillans. Sheriff Wood interested himself in the Sessional School, Edinburgh, and there, with the aid of its master, worked out what came to be known as the Intellectual System. While availing himself of the help of monitors, he sought to make the master also a teacher. He was to teach as well as superintend. It was to be his duty to take any class where his teaching was needed, and to instruct all in turn. Wood also extended the area of instruction. Reading-books were introduced, and displaced, as such, the Holy Scriptures. Geography, history, and grammar were added. There followed a great improvement in the methods of instruction, prominence being given to questioning—so that the system was sometimes termed the Interrogative. In a short time its influence was felt in England, in the supply of reading-books, of wall maps, and of improved appliances, and especially in the quickening of the intellectual and moral life of the school.

II. **The Training System.**—1. **Graded Schools.**—The monitorial system was a great improvement on what it displaced, and in fact became a necessity to the schoolmaster when he began to count his pupils by hundreds. But experience disclosed that its results were below what should be sought, and that in many cases they were not enduring. To David Stow is due the credit of an attempt to introduce a better system, and to him we owe a long, earnest, and persistent advocacy of a principle which was utterly opposed to that of Bell's vicarious action. To secure moral and intellectual development, and that intelligent culture which a good school ought to supply, he urged that the pupil's mind

should be placed constantly in contact with that of the master. This could be done only by a system of schools in which each school consisted but of one class, with its own teacher. This conception he endeavoured to embody in the schools connected with the Training Colleges he was instrumental in establishing at Glasgow. It is obvious that such a system of schools could only be established amidst large populations, and would require combination on the part of the promoters of elementary instruction. Hence but few schools exist in this country on this plan, though they are being established on a somewhat modified form by the London School Board.

2. **The Mixed Mode. Class and Section.**—Misunderstanding the special feature of Stow's group of graded schools, there was an attempt to introduce simultaneous teaching of all ages into the ordinary school. For this purpose a huge gallery was erected in the schoolroom, capable of seating all the children. Here the attempt was made to instruct them together, though their ages ranged from 7 to 14. Of course it was a failure. It was so evidently impossible, that the wonder is it should ever have been made. Still it was persisted in for years by the denomination that had adopted it.

Another adaptation was more successful. It attempted to combine in the working of a school the two principles of Bell and Stow. The importance of bringing the mind of the master into frequent contact with the children, and the great advantages to be obtained by the employment of "picturing and training" in collective lessons to groups of children not too far removed in attainment, led in British schools to the building of class-rooms, and in National schools to groups of parallel desks, where proximate classes might be joined for such purpose; at the same time, it was thought desirable to retain the other features of the monitorial system. This mode of working schools was officially recommended in 1840 by the Committee of Council on Education.

III. **Pupil-teacher System.**—Prior to the appointment of the Committee of Council on Education, pupil-teachers had been employed in several large schools in Edinburgh and London; but in 1846 the Pupil-teacher System was inaugurated by the celebrated minutes of that year. The introduction of this element has much improved

the work of elementary schools. It has rendered possible a higher technical instruction to larger groups than monitors could properly manage ; it has secured more continuous action of one mind on the same division, under a deeper feeling of responsibility for its progress ; it has economized to the greatest extent the labours of the monitors, by placing them under the charge of the pupil-teacher ; and it has set the master free to give that higher culture in the section and class, and to give his attention at those points on which the intelligence and progress of a school depend. It has modified, also, the internal arrangements ; so much so that most of the schools where pupil-teachers are found approximate to a common type. Groups of parallel desks, ranged along a side or the sides of the schoolroom, with draft space in front, form the most marked feature of the internal arrangements.

**IV. The Education Act of 1870**—made possible by the previous work of the denominational schools—recognised the right of every child to some amount of instruction. It has led to the establishment of schools in large towns, the chief feature of which is the appointment of a trained adult teacher to each class. In such schools there is a head master, on whose knowledge of educational principles, organizing power, practical skill, and governing tact, depends the efficiency of the whole. Other schools of a large size are organized so as to employ an assistant adult teacher as well as pupil-teachers and monitors. In some of these the school is divided into two parts, and each carried on as a distinct school ; in other cases the head master and assistant are engaged alternately in superintending the school, while the one who is free takes a class or a section to instruct.

**V. Infants' Schools**—We shall not form right notions of educational progress in this century, if we ignore the work of infant schools, and the influence of those educational principles which find their first and fitting sphere there. The writings of the Edgeworths, the writings and work of Pestalozzi, with those of Wilderspin, the Mayos, Stow, the first officers of the Home and Colonial School Society, and later on, of Frobel, mark the successive steps of this movement. The works of the Edgeworths contain the principles and recommend the practices which were embodied by Frobel in the Kindergarten system. In fact

this system may be regarded as the outcome and expression of those principles which under the misleading term of Pestalozzianism had been worked out in many of the infants' schools of this country. The early culture of the senses, and the recognition in the child of many susceptibilities and powers, which must be gratified by active employment in order to its development and training, may be taken as the essence of the contribution by infants' schools to educational theory.

## CHAPTER II.

### SCHOOL ORGANIZATION.

**I. Necessity.**—Few things of a mechanical kind have such an influence on the progress and efficiency of a school as good organization. It may be safely asserted that it is as essential to success as the power to teach, or the ability to govern. In fact, without it the latter may be defeated, and the former it may be impossible to exhibit. The objects of an elementary school are so multifarious and varied, and the conditions under which they are sought are so peculiar, that it is only under skilful arrangements and combinations that they can be achieved. In every school, reading, writing, arithmetic, and other subjects have to be taught to all ; and besides these, and not less important than these, habits of punctuality, attention, diligence, and earnest effort have to be fostered, the principles that should regulate social intercourse have to be cultivated, powers of observation, inquiry, and thought have to be developed, and the truths which relate to the child as immortal and redeemed have to be brought to bear on the consciences and affections of all.

The difficulty in accomplishing these in many elementary schools is the presence of children, differing in ages and attainments, for whom separate and suitable courses of instruction have to be provided, and carried on side by side, and for each of whom there must be means of testing his progress and caring for his wants ; to which add that the master, who alone is responsible for all this, and who ought to act on all, test all, and instruct all, can

act directly, at any one time, but on one point at once. The difficulty is enhanced by its being imperative on him to find constant employment for all, otherwise the restless energies of the unemployed will find vent in annoyance and disturbance to others. And the difficulty is increased by the limited period of school life—too limited to accomplish what is wanted, but which must be made to yield the very highest results that it is possible to attain.

**II. Nature and Principles of Organization.**—School organization is a system of arrangements designed to secure constant employment, efficient instruction, and moral control. In other words, it aims at providing the means of instructing and educating the greatest number in the most efficient manner, and by the most economical expenditure of time and labour. Organization puts each child in its proper class; allots to each class proper work—proper in kind and amount; secures to each subject the time that is justly its due; arranges the work, both as to place and kind, so as to preserve a quiet room; puts the right teacher in the right place, and in the best circumstances for instructing, inspecting, and controlling his class; and properly distributes the master's presence and work, so that no interest of the school in any of its parts shall suffer. Now all this implies a power to take in comprehensively the whole course of each pupil's requirements during his school career, and to combine all the arrangements and working, so that nothing shall be omitted, nothing in excess, no confusion, and no interference of one subject with another.

The following general principles should regulate all school arrangements.

1. Everything must be considered in its relation to the interests of the scholars, which must not be sacrificed to appearances, nor to the ease of the master.
2. Every child must be placed where he can work with most advantage to himself, and must have that amount of work which will most profitably occupy his time.
3. Every class should have a teacher, or some one responsible for the due performance of its work, and the class should occupy such a space, and be so arranged, as to be completely under its teacher's eye.
4. Each class should be so placed as to admit, to the utmost extent possible, of the concentration of attention on its work without being disturbed by other classes.
5. Each class

should be so arranged that the children may be easy of access, or may step out to the front without disturbing others. 6. The furniture should be so distributed, and the classes so placed as to admit of the complete supervision of the school by the master from any point. The consciousness of such an arrangement would serve as a check on the idle and unruly, and would be a stimulus and encouragement to the diligent and the teachers. 7. Provision must be made for alternate changes of position, and of work requiring the exercise of different mental powers. 8. The sitting and standing places ought to be near enough to each other to allow of the changes being effected with least loss of time. 9. Opposite to each class, or draft, should be a blackboard, and all things required for the use of the class should be at hand, to prevent confusion and loss of time.

### III. Classification. 1. Importance and Difficulty.

—A class is a group of scholars capable of being instructed together, and of benefiting to the largest extent by such instruction. It enables the teacher to economize his time and labour, and offers the best sphere for evoking the intelligence and activity of the learner ; it supplies the means of increasing the efficiency of instruction, of finding constant and suitable employment, of establishing control, and of preserving the order and quiet of the school ; hence it will appear that good classification is essential to the success of a school. Now, at first sight, nothing seems easier than to group children who have gone over the same ground, and reached substantially the same point ; but this process is affected by certain considerations which tend to make it a more difficult matter than at first sight appears. One is, that the number of separate groups must never be more than can be efficiently officered ; another, that while a general standard has been reached by those forming a large group, their progress in different branches—especially of the essential subjects—is often very varied ; a third, that sometimes children are found in a school much bigger and older than those with whom they would properly be classed, but whose self-respect would be injured, and all heart in their work lost, if they were so placed : not to mention that a few sometimes stay so long in the school, and are so far ahead of all others, as to make their presence really a difficulty.

2. **Basis of Classification.**—(a) Classification ought to agree with such fundamental principles of human nature as these. There exists a diversity of ability ; some have predilections for one class of subjects, or a natural aptitude for them, which they have not for others ; and the faculties to which some subjects address themselves are later in their development in some children than in others. (b) Hence age and length of time in school are not the grounds on which a school should be classified ; yet progress should be commensurate with these conditions, so far that, as children approach the period when they leave school for labour, they ought to have made an average progress ; and if they have been long in the same school, they should give evidence of the care bestowed on them. (c) Classification is grouping according to resemblances, and the real ones in school are ability and attainment. When this is the case instruction can be adapted to all, the evil being avoided of its being below some and above others. The children then are on competing terms, and this is a favourable condition for exciting emulation and vigorous exertion. The sympathy of the group, their respect for each other, and, consequently, their mental activity, are superior when their standing is about the same. (d) As each child has a right to be placed in the best circumstances possible for his own advancement, and as there would be positive injustice in retarding his progress in one subject because he is slow in another, for the subjects reading and arithmetic, and those allied to them, there should be distinct classifications. To have but one classification is to disregard the principles on which classification should be based, and also the purpose of the elementary school. If children are in the same class for reading and arithmetic when their progress in both is not alike, they are not in both subjects on competing terms ; hence emulation is next to impossible : besides, where disparity of attainment exists, the instruction cannot be suited to all, hence all suffer ; and as the purpose of the elementary school is to bring forward the scholar thoroughly in reading and arithmetic, and to give a general discipline to his mind, to have but one classification would be to reject one of the best means for securing this thoroughness and such discipline. (e) To keep the children on competing terms, there must be examinations at short intervals, and removals

of the proficient. This will keep the class from looseness of discipline, and be a powerful stimulus to exertion. None will be disheartened by being kept back, the best workers will be stimulated, and even laggards will have a motive to redouble their efforts. (f) Graduation of work is important from this point of view. In passing from one class to another, the pupil should not be disheartened by a great difference between what he had left and what he had reached ; he ought to find somewhat harder work, but not so much as to make it very difficult for him to keep his position.

3. **Number of Classes.**—This will be determined by the number and character of the tests applied in each subject. The more minute the test the greater the subdivision. But it is not desirable, in a school with a deficiency of teaching power, to have too many tests, as the more there are the less of the master's attention can the pupil have. If the classes are too few, each will probably comprise children who cannot advance together from inequality of attainment.

(a) **Reading.**—Classification for reading ought to provide for the pupil's advancement in his knowledge of book language ; for much individual practice, that he may obtain ability to read it ; and for lessons in the art of reading, as such. Division into classes, with a distinct book for each, will provide that in each class, as he advances, the pupil shall encounter greater difficulties of language, matter, and style. To secure individual practice, the class should, when reading, be subdivided into drafts, the lowest comprising such as have recently passed from a lower class, and the highest those who bid fair to be soon fit for removal to the next class. But the class with its somewhat difficult book does not furnish the best condition for a lesson in the art of reading, as such. For this, it is better to form two classes into a section about twice weekly. A lesson, presenting no mechanical difficulties, should be selected from an easier book, and the master should give his whole attention to the style of reading, which he is enabled to do because there are no mechanical difficulties.

(b) **Arithmetic.**—In arithmetic three things must be sought—instruction in processes and principles, silent practice, and competition in sums from dictation. The first of these would require a minute subdivision, which would be found to vary with circumstances. The second would allow

about seven classes to be formed, of which the seventh would be engaged on the concrete, and on the first operations with figures; the sixth and fifth on simple operations with the elementary rules; the fourth and third on the more complex operations of multiplication and division; the second on proportion, and the first on fractions and the higher rules. Collective competition would unite two classes.

4. **Size of Classes.**—According to the principle laid down above, the number comprised in a class would be determined by as many as come up to the standard fixed; but in the practical working of a school this must be modified by the consideration how many can be efficiently instructed. The size of a group ordinarily should vary according to the subject, the form of instruction, and the teacher employed. Generally, as large a number should be grouped as is consistent with efficient instruction; for whatever time is spent on a few, which would have been as profitably spent on a larger number, is a loss of power, time, and benefit to the neglected ones. Where subjects admit and require a large group—as in collective teaching—a section of forty can be taught with as much ease by a good teacher as a draft of ten, and with far more profit to each individual than if the same amount of time were divided among four drafts of ten each. In all exercises of attainment, no class should be larger than is consistent with thoroughness and minuteness of individual examination. In the upper part of the school, in reading, and in subjects of systematic instruction—as grammar—such classes might contain from twenty to twenty-four children. But classes of this size will be found too large for children engaged in the mechanical stages of reading. Here much individual practice being required, a smaller subdivision is demanded;—drafts of not more than ten will meet the necessities of the case. Lastly, the size of a group must bear some proportion to the skill of the teacher. Monitors may manage drafts, pupil-teachers classes, while the section can be efficiently worked by an adult teacher only.

IV. **Modes of Working.** 1. **Forms of Classification.**—Owing to diversity of views both as to the aims of elementary instruction, and the best means of attaining them, there are found considerable differences

in the modes of grouping children for instruction, and in the methods employed. Some schools are distributed into small drafts of ten or twelve children, and nothing is sought but the merest mechanical drill ; others are worked in classes of twenty or thirty. In some schools there is a mixture of these two, classes of twenty to thirty being employed for matter of attainment, drafts of ten for the purpose of mechanical skill. In some schools the mode of working is alternately in sections containing forty or fifty children, by means of collective lessons, and in drafts of ten for the attainment of the elementary arts. Some schools employ sections and classes only ; others, and these are among the best, employ sections for collective teaching, classes for exercises of attainment, and drafts for matters requiring much individual practice.

**2. Arrangement of Work.**—No elements of organization are more important than those which fix whether the same kind of work, or different kinds, and what kinds, shall be going on at the same time ; whether collective teaching shall be a part or not of the school routine, and how far provision should be made for the three great parts of school work—preparation, instruction, and reproduction. On these points there is, as might be expected, great diversity of opinion and practice. A few of the more prominent modes may be briefly noticed.

(a) **Synchronous mode.**—In some schools all the classes are engaged on the same subject at the same time. This, it is thought, enables the master to distribute his teaching more in accordance with the wants of the school, than when two or more important subjects are going on together : and as the claims on his attention are thus fewer, his teaching and superintendence will be more efficient.

(b) **Bipartite plan** —Another mode is to divide the school into two parts—one to occupy the desks for silent exercises, while the other is at draft places for reading, dictated arithmetic, Scripture, or any oral teaching that may be deemed necessary, each division changing places at the end of every lesson. This plan is suitable for a poor monitorial school, where the master is too weak to instruct large groups effectively, or to hold his school in hand while doing so.

(c) **Tripartite form.**—Another plan, based on the fact that school work consists in the preparation or practice of lessons, oral teaching, and silent exercises, is to have three kinds of work going on at the same time. This plan was proposed in order to bring every part of the school daily under the action of the master's mind for a sufficient length of time to warrant the hope that he would secure a uniform and intelligent progress. It claimed for its successful working, that each kind of work should be carried on in a separate room, each division of the school occupying each in succession, in such wise that each would pass from the preparation of a lesson to the gallery, for oral examination and instruction therein, and thence to the desks for silent exercise. In a modified form this mode has been introduced into many schools where there has been unwillingness to yield the principle that all parts of a school should be under the eye of the master; into others where it is felt to be hazardous to some of its best interests to employ him altogether in teaching; and in others where a twofold classification is deemed essential to sound progress.

(d) **Eclectic form.**—This mode aims to combine, in due subordination to the wants of the pupils, each mode of classification and arrangement, and each form of teaching. Drafts and monitors are employed in the practice and preparation of reading; classes combining two or three drafts are employed when the reading lesson is the subject of exposition, and in exercises of attainment, such as geography, history, and grammar, which require that each pupil shall be thoroughly examined; and the section of two classes for Bible and moral lessons, and for those collective lessons whose special purpose is to develop and discipline the intellectual faculties. The arrangement of lessons in this mode of working is various. At one time it is tripartite—reading proceeds in drafts; exposition in the class or section in the gallery; and dictation, composition, or penmanship in the desks. At another time all are engaged on the same subject at once. This is the case with arithmetic. Here a more careful classification is required than in less exact subjects. By instruction proceeding in it in all classes at the same time, the pupil can be placed where he will get just what he needs. Still, though the subject is the same in every

class, there is variety of form. Instruction in processes may be given in some groups, competition from dictated examples in others, and silent practice at the desks in others. At other times, when lessons of attainment are proceeding, as in geography or grammar, the classes in their vicinity are engaged in some silent exercises. The eclectic mode of working, with much variety in its details, is extensively employed by the more able schoolmasters. In fact, it is suitable to such only. Weak men, unable to teach large groups effectively, or to govern their schools when they are employed on set lessons, may get better results by superintendence, combined with working through drafts. But where the ability exists, no mode of working is so effective as that which combines in proper proportion draft, class, and section teaching.

**V. Time-tables. I. Advantages.**—A time-table is an essential part of the machinery of a school. It benefits the teacher, as all do more and do it better with a plan than without one. He is less harassed, as the time-table saves him from having to decide on what next, amidst the distractions of school-keeping; besides, the claims on his attention being lessened, he is more at liberty to devote himself to the business of the hour, and to cultivate that concentration of mind and purpose which are so necessary amidst the multifarious claims of an elementary school. Nor is the advantage to the children small. The time-table provides for the return, at stated periods, of each subject of instruction, than which few things are more conducive to progress; and opportunity is given for the arrangement of the subjects so as to bring different sets of faculties into play in succession, a plan which promotes relief and mental vigour. Practical lessons grow out of its proper observance. The children are thus impressed with the value of time, the importance of punctuality, the honour due to law, respect for the rights of others, and regard for truthfulness—all of which are enforced by the example of the teacher, in his submission to the restrictions which his routine imposes. Order and industry are also promoted; for a given work having to be done in a given time, both teachers and children become anxious to avoid waste of time, everything necessary to the work in hand is in its place, and a strong motive exists to bend the entire energies to the allotted task.

2. **What a Time-table should show.**—A time-table is a written form of the work actually done in a school, the order in which it is done, and the time devoted to each separate portion of it. A time-table does not show the work actually done in a school unless it shows the work of each class, the mode of that work, whether repetition, exposition, or reproduction, and the agent under whose care it is done, whether monitor, pupil-teacher, or master. A time-table, to show the order in which the work is done, must exhibit clearly how the subjects follow one another, how the related lessons stand, as reading and the exposition of it, or a lesson and its reproduction, and in what place it is done, whether in standing-places, desks, gallery, or class-room. A time-table, to show the time given to each subject, must make clear the length of each lesson, and the number of lessons weekly to each subject.

3. **How to proceed.**—(a) The first thing is to determine the branches to be taught. In all schools, reading, writing, and arithmetic must have chief attention, because they are absolutely essential to the prosecution of other studies. Of other matters, which the length of school life may warrant the introduction of, those are next in importance which will aid the acquisition of these, or to which these may be applied, or which are a suitable general preparation for ordinary occupations. Grammar, geography, and history meet the former condition; geometrical drawing, mensuration, and book-keeping the latter. (b) The order in which the subjects follow each other should provide for the relief of the brain, by arranging, as far as possible, that subjects of a like kind do not immediately succeed one the other. The same end—the relief and vigour of the brain—should be obtained by securing that each subject shall be taught under the form and conditions necessary to its speedy and successful attainment, and care must be taken that two classes in close vicinity shall not have lessons which would interrupt each other's work. Intervals for open-air exercise should be appointed. (c) The length of time given to a lesson must be determined by the age of the children and the nature of the subject. The younger the children are, the shorter is the period for which they can fix their attention, and the greater is their need of change of position and employment. The greater the demand which a subject

makes on the brain, the shorter is the time that it can sustain the stress. Perhaps for infants, lessons of twenty minutes' length, and for juveniles, of a half to three-quarters of an hour, will meet the case. (d) There must be before the mind the number of classes to be provided for, and also the basis on which the classes are formed. With respect to the first, there ought not to be more classes than there are teachers ; but this admits of modification, for a portion of a school ought to occupy desks at reproduction, or other silent work, and this will allow of fewer teachers being employed, or of a better classification. In respect of the second, the best test for admission to a class is skill in reading and giving the sense of what is read. Arithmetic is a test of an aptitude for a particular subject, and does not measure a boy's ability, and is not therefore suitable as the basis of general classification. (e) Two subjects of essential importance to the general progress and discipline of the scholar, like reading and arithmetic, ought not to be taught in different parts of the school at the same time. For if lessons in these subjects proceed simultaneously, the master cannot give such attention to the weak parts of a subject or of the school as sound and general progress requires ; and because it may happen that some in a reading class are behind the others in arithmetic, and it is only possible to provide right instruction for them without wasting the time of any when arithmetic is given all through the school at once. (f) When reading is one of the lessons other classes should be engaged in quiet exercises, as dictation, reproduction, or penmanship, as quiet is necessary to the cultivation of the ear. (g) The plan of the schoolroom should be held in view, that the lessons may be arranged to secure quiet and freedom of movement. (h) To whom each lesson is assigned—monitor, pupil-teacher, or master—should be indicated. Of course all the master's teaching cannot be marked, as it will vary with circumstances ; but so much should be indicated as would bring him daily into contact with all the classes.

## CHAPTER III.

## SCHOOL-KEEPING.

SCHOOL-KEEPING is that branch of school management by which a master becomes thoroughly conversant with the condition of his school as to the attendance, payments, instruction, and progress of the scholars: in which he attends to those conditions that affect their health and comfort; and by which he aims to make school a pleasure, and to secure healthy activity in school-work.

**I. School a Pleasure.**—It is important that the teacher should know how essential it is to the accomplishment of school purposes that the children should realize this sentiment, to which in these days they are taught to give utterance in song. “School is a pleasure”—should be not merely a sentiment made vocal by them, but a reality. School should be invested with attractions, and associated with agreeable feelings. One reason for making it so is, that childhood is pre-eminently a happy period, and to promote its happiness is to be a co-worker with God. Another is, that it is one of the most favourable conditions for securing attention, learning, and for the cultivation of intelligence. The sunshine of cheerfulness diffused by the genial disposition of the teacher, and not clouded by the arrangements, work, or management, is a powerful incentive to children to work with a will, while an atmosphere of gloom and discontent is a clog on their efforts. A third reason for promoting a cheerful and happy spirit in school is its importance to moral training.

**II. First Measures in School.** 1. **First acts.**—On assuming the duties of a school, the teacher, and especially the young teacher, should be very careful of his first acts. Often irreparable injury is done by inconsiderateness on the one hand, or by high-flown notions on the other. It is a very general complaint that the young teachers now annually issuing from Normal colleges are utterly unacquainted with the requirements of school-keeping, and often inflict injury on the schools to which they are appointed. Now it ought to be known that much that is essential to good school-keeping only comes by experi-

ence ; it is an art, and—as in all other arts—perfection is only attainable by practice. But as an art it has rules and principles, a knowledge and observance of which will facilitate the acquirement of skill.

**2. First Impressions and future Influence.**—Future success in school-keeping often depends on first efforts and first impressions, and especially on the spirit in which the teacher regards his work. The first interview with the children, and generally the first day in school, will materially tell on his future influence. Sharp, frequent glances will be shot from eyes eager to read the character of the new master. Experiments will be made by many for the same purpose—on his patience,—Is he irritable? On his forbearance,—how far may they go with impunity? On his firmness,—Is he vacillating? Will he be lax and strict as the fit is on him? The teacher should be very careful in the matter of fault-finding. His modes of expression and of illustration are different from what they have been accustomed to, hence misapprehensions arise. All his directions should be explicit—expressed as clearly as possible. The attempt to obey them should be praised. He should be prepared for outbreaks. Of these little notice should be taken at the time ; he should observe, and make notes of his observations, and at the close of the day review in a pleasant, not a querulous tone, pointing out where things might have been better.

**3. No rash Changes.**—The first day—indeed the first week—should be spent in observing the working, in ascertaining the state of the classes, observing character, making notes, and generally in laying up material for his future guidance. He will find it better in all respects to let the school be worked in its old way. Indeed, general cautiousness should be exercised in introducing new plans. Perhaps those already in operation suit the district and circumstances better than any he could introduce. A new teacher upsetting old and tried arrangements may entirely ruin a school. No wise man will rashly innovate. There are prejudices of parents, habits of children, and feelings, it may be, of apprentices in favour of what has been, which forbid it. Innovations, unless slowly and cautiously made, produce disorder, confusion, waste of time, checks on progress, and bad discipline. Reports

of these things get out of doors, and spread, the children are withdrawn, and the cultivated field becomes a waste.

4. **Home tasks.**—A teacher entering on a new charge should take care that the children have not less to do at home than before. He should ascertain what system of home tasks has been in operation, and, at the end of the *first* day, give out the usual tasks for the coming one. He may find some difficulty in making himself acquainted with what has been the school practice in this matter, unless he makes it one of his points of inquiry among the parents the week previous to his assumption of the school. The time-table will yield him some assistance.

**III. Special duties.** 1. **Superintendence.**—Considering the elements of which it is composed, a school should never be without superintendence. It is doubtless desirable that children should be trained to depend upon themselves, to do right from no lower motive than because it is right; it is an evil also to imply distrust and suspicion, yet there is so much of thoughtlessness, ignorance, and occasionally of worse elements in a school, as to render vigilant oversight necessary. A portion of every day should be devoted by the master to superintendence, and when otherwise engaged he should delegate the duty to subordinates. The objects superintendence is to secure are the following:—  
(a) *Work.* The spirit of work must be infused into every part of the school. The presence, example, and spirit of the master must pervade every class, and must be specially felt in the weak ones. All temptation to idleness must be prevented. (b) *Order.* Order in the classes and regularity in the movements are other objects of superintendence. Where classes become disarranged, where slovenly postures are assumed, where time is not kept, and where disorderly marching is permitted, a silent influence is at work, which cannot but have an injurious effect on the character and habits of the future. (c) *Protection.* Uniformity of treatment and protection from evil influences have to be secured. In the absence of efficient control, children are subjected to a variety of treatment at the hands of apprentices and monitors which is alike injurious to their character and to the authority of the master. From this it is his duty to preserve them. Besides which, there is a sort of moral protection required from him; such as screening them from improper words, by carefully removing any which may have been

written on the walls or elsewhere, and by taking such measures as will prevent a repetition of the offence ; separating the children whose mutual influence is demoralizing or in any way evil ; and removing entirely any child whose influence is pernicious. Further, there is what Heinroth calls " corporeal protection " required ; that is, protection of the health, by attention to the position of the children, to the necessary physical exercises, and to the ventilation.

**2. Instruction.**—As the master is responsible for its efficiency, the following points will require his attention. (a) *Branches to be taught.* He has the selection of the matters of instruction, and their adaptation to the wants of the various classes. He must take care that the subjects are taught in their right order, with especial reference to the periods of mental development, and that the essential subjects, reading, writing, arithmetic, and Scripture, have most time devoted to them. (b) *Right methods.* He has to see that each subject is taught by appropriate methods. This is a point requiring great vigilance. Situated as elementary schools are, with subordinates who are necessarily very ignorant of method, it becomes the duty of the master to show how to teach, as well as to fix what to teach. This he may partly accomplish by his own exemplary teaching ; by instruction in method ; and by careful inspection and criticism of the methods employed. (c) *Own teaching.* The nature and amount of his own personal teaching is a matter of great importance to the success of his school. The day is past in which the master was considered merely the director of the machinery. No longer the mere policeman of the establishment, he has taken his right place as its teacher and educator. Were any considerations necessary to show the reasonableness of this, they are to be found in the claims of the children on his superior skill in intellectual and moral training ; and in those of his subordinates to witness exemplar teaching. (1) His teaching should not be restricted to any one topic, or any form of instruction. Even in those which are the most technical and mechanical, his subordinates should have the benefit of his example, and the class the infusion of his spirit. (2) The daily amount of his teaching will be determined primarily by the size of his school, and by the character of the teaching power at his disposal ; but he ought to claim for himself the privilege, and impose upon himself the duty, of coming, at least

once daily, into personal contact with each child. (3) In the distribution of his labour each division has a claim ; but the middle and lower classes require the greater share. It is well to secure the morning for his own teaching, making the afternoon a season chiefly of learning and superintendence.

3. **Examination.**—To successful school-keeping, whether viewed in relation to the internal progress of the school, or to the estimation in which it is held out of doors, one of the most important things is the practice of periodical examinations. We do not here refer to public examinations, valuable as they are to the growth and prosperity of a school, but to monthly examinations, for the threefold purpose of advancing the proficient, recording progress, and criticising methods and results. (a) The first of these is necessary to the harmonious working of the school, and to the efficient and systematic instruction of a class. A course of lessons for a given period, and that a short one, with the certainty of an examination at its close, will excite and sustain a spirit of healthy emulation; at the same time, removal of the successful keeps the class more equal in point of attainment. (b) A monthly record of the position of each child in the various subjects of instruction, with an indication of its chief wants, often leads to the discovery of weak points in the instruction, both in relation to the school and child. Statistics are thus furnished which form a valuable body of reference, by which managers and inspectors may form an estimate of the work done in a school. They enable the teacher to apply the proper tests to the progress of a child, whether it is in accordance with its age, its length of time in the school, and the labour bestowed. They also enable the master to supply the parents with monthly or quarterly reports ; thus strengthening their interest in the school and in the progress of their children, and increasing their confidence in the master. (c) The periodical criticism of his methods, and a record of their results, will commend themselves to everyone who is thoroughly aware of their importance educationally. Education is one of the inductive sciences. Theory must be tested by facts, and principles and methods must be generalizations from such facts. Some masters are content with the mere application of what others have discovered ; they never deviate from a beaten track ; theirs is a dog-trot, in which they never mend the pace nor

alter the course from what is customary. Others, aware that mental and moral growth are much affected by the circumstances and surroundings of an individual, and by the influences to which he is exposed, are constantly observing facts, and modify their practices accordingly. Such teachers need no inferior motives to appoint times of examination for the purpose of recording facts in the light of a dispassionate criticism. Here they are presented with an opportunity of testing, after careful and lengthened trial, the efficiency of different methods on different minds, and in various hands ; and of testing the application of various methods to different subjects, and at different ages. Besides, as much of the instruction is necessarily committed to inexperienced teachers, all of whom have claims on his superior skill, and all of whom should be encouraged and stimulated by the fact that their work is inspected, it is desirable to enter into a book for reference his criticism on their methods and results.

**IV. Home and School.** 1. **Attendance.**—It is very desirable that a schoolmaster should stand well with the parents of his scholars. Their co-operation will speed and strengthen his work. Nor will it be difficult in ordinary cases to secure it. Few things, apart from the character of the instruction, have greater weight with parents than a reasonable strictness in the enforcement of attendance. Even on such parents as are ignorant, and consequently unable to appreciate much of other school-work, the efforts of a master to secure regular and punctual attendance are not thrown away. Knowing the value to themselves in their daily labour of such habits, they will yield their respect to the master that enforces them on their children. No case of absence should occur without an inquiry being sent to the parents for the cause. And the more formal the circumstances under which the inquiry is sent, the more effective it is likely to be in impressing the children with the importance of regularity. Every day a few minutes should be appropriated, both morning and afternoon, to inquire publicly what boys are absent, to appoint others to call, and to receive the replies.

Want of punctuality must also receive attention ; any one entering late should be asked his excuse, and, unless a valid one is offered, should be rebuked. But as a want of punctuality is more frequently the parents' than the child-

ren's fault, the measures adopted should be adapted to impress them. The great aim, therefore, should be to form a *good* school, that it may be felt to be a *loss* when any of its exercises are missed. He should take some pains, too, to make them acquainted with the routine of the school, to show them that late-coming must—though it might not in their school life—deprive their children of a portion of their instruction. He should keep a "Lost-Time Book," in which to record the number of late times and the amount of time lost. An abstract of this should be sent at fixed periods, with the remark that such a habit cannot but be injurious to the child's character and progress. The value of this plan is, that it throws the responsibility of punctuality where it ought to rest—on the parents; and if persevered in will be found greatly to reduce the number of late comers.

The school should open for the assembling of the children at least a quarter of an hour before school hours; and the teacher should be *present* at the opening. This is essential. If he would have his children feel that "school is a pleasure," he must not show, by coming just in time, or a few minutes too late, that he comes reluctantly. The example of the teacher is highly conducive to right feeling in this respect. He should be the first to come and last to go, and all his conduct should show that the school is a place where he finds the highest gratification.

*Begin at the minute.* Just as the clock strikes nine or two, and ere the sound of the last stroke dies on the ear, the key should be turned in the lock, and the devotional exercises commenced; this should be succeeded by marking the attendance lists, that those who are present may witness that their punctuality is observed and recorded; after which the door should be unlocked, the late comers admitted, and their names entered in the "Lost-Time Book." All who are admitted at the close of marking the books might be permitted to join their classes, but to lose place there at the discretion of the teacher.

**2. Home Exercises. (a) Impression on Parents.**—An important mode of securing the parents' co-operation is that of "home tasks." Besides making the parents acquainted with the character of their children's work, they give them the opportunity of testing their progress. When the exercises are good, that is, well adapted to the

learner's condition, and of proper length, they raise the character of the school, as parents get the impression that their children are well looked after. Such exercises, too, tend to impress the children with the importance of using their time well, and help them to the habit of doing so. Having something to occupy them, they are preserved also from the contamination of the streets.

(b) **Fix Learning.**—But these are not the only considerations in favour of home work. Instruction given in schools is of an evanescent character, unless accompanied by two conditions—that it is intelligent and not rote, and that it has received sufficient attention from the learner to take a firm hold of his mind. Now it is to be feared that in schools where home work is not done the amount of attention to any subject is not sufficiently continuous and independent to make it a permanent possession of the scholar. But where it is the practice to have lessons *prepared* at home to be *said* in school, the teacher's place being to *hear*, and when needful to *explain*, there is ground to hope that they will not speedily escape from the mind. With this aim the child should be placed in possession of the books necessary to its instruction, and should make nightly some preparation for the lessons of the following day; this alternating with work set to deepen impressions already produced in the school, or set as tests of the success with which lessons have been received.

(c) **Self-reliance.**—Other advantages accrue to the learner much greater than the mere permanence of his acquisitions. Not the least is the habit of self-dependence which such tasks engender. In school the child is constantly assisted. In any case of difficulty he looks to his teacher for aid, and the consciousness that it will be given keeps him from putting forth all his energies. But at home he must, in general, work alone. There is no one to whom he can apply, and he must learn to grapple with difficulty and to conquer it.

In this way, too, he becomes accustomed to apply himself to his work, having no other stimulus than the certainty of the next day's examination. He thus performs *present* work from motives drawn from the *future*, and acquires the habit of obedience to motives not suggested by the presence of the master.

(d) **Higher Culture.**—To the master home tasks offer the advantage of setting himself free from superintending petty details, and of giving him the conditions and the time for a higher culture of his children. They also supply the means of work for every child, class work often failing to engage the continuous attention of all.

**V. School Statistics. 1. School Registers.**—(See Appendix.) School registers are kept to enable all interested in a school to obtain information on such points as the total number of children that have ever been under instruction in it, the average ages, and length of time in the school, the amount of ascertainable benefit to each child, and the classes of society chiefly benefited. They ought also to supply the teachers under inspection with such data as will enable them to make accurate returns at the inspector's annual visit, on such points as the number of children admitted or withdrawn in the year, the average attendance and average ages, the number entitled to the capitation grant, and the state of the schools as respects instruction,—points having a material influence on the annual grants made to schools. To all teachers they should supply the means of placing before parents particulars of their children's attendance and progress. The fact of keeping such a record has an important influence in promoting regularity, and in preserving the teacher from unjust blame.

(a) **General or Ledger Register.**—This is a register of admission, progress, and withdrawal. It is designed to preserve the names of the pupils who have at any time attended the school, the date of their admission, their age at entrance, their means of previous instruction, their progress through the classes, and the date of their withdrawal. It should also record the name, residence, and occupation of the parents. It should have annexed to it an alphabetical index, so that any child may be readily found. Each child should have its own number, which should be transferred, with its name, from the column headed "Index number" to the proper page of the index. If a child should leave, and return to the school after an absence of any duration, care must be taken that it is not counted as an entirely new scholar. This might be done by its resuming its original number, but this would be a clumsy mode; a better plan would be to

assign as a new number the number attached to the name immediately preceding the readmission, but distinguishing it by an asterisk : *e.g.*, James Jones on his first admission was 758 on the register ; he leaves, but subsequently returns. John Smith is admitted on the same day that Jones returns and his number on the register is 869, hence Jones's new number would be 869\*, which placed opposite his name in the index would show at a glance that he had not been in constant attendance.

This register should be kept exclusively by the head teacher, and made up at least once a week. Special care should be taken to obtain exact information as to the date of birth, the school last attended, and the highest standard in which it was there presented. For the former the registrar of births must be consulted if necessary, and for the others the former teacher.

(b) **Attendance or Class Register.**—This register is designed to record the state of attendance from day to day. It should contain columns for each child's admission number, name in full, and age last birthday ; and columns in which to mark the daily attendances for all the weeks in the school year ; over these columns should be spaces in which to put the day and month. There should be a column for the entry, at the close of each week, of the total attendances made by each child during that week, and, at the end of the register, columns to sum up the total attendances of each child during the year. At the foot of the attendance columns the number of attendances made by the class should be entered separately for morning and afternoon, and at the foot of the column which contains the total attendances made by each child in the week should be placed the total number of attendances made by all the children on the register during that week. At the foot of each set of weekly columns there might be a space in which to enter the number of times the school was opened that week.

The value of the attendance register depends upon its accuracy and trustworthiness. It should exhibit every attendance made by every child. If the child is present from the commencement to the close of the meeting of the school a stroke / will mark the fact. If a child is late, or leaves early, so as not to make a full attendance (fixed by the Education Act at two hours each half-day), the fact

should be shown by a cross,  $\times$ . The register should be marked with ink, and at the time when the attendance is taken. Absence should be marked by a letter which will indicate its cause. There should be no blanks. Erasures or alterations must not be made. The names of boys in a mixed school should be apart from those of the girls.

(c) **Summary Register.**—This register is designed to exhibit in a tabular form the facts respecting the whole school found in the several class registers. Its form will vary in infants' schools somewhat from that given on a subsequent page. It should contain in one form a column for each week in the school year, and a column for the times the school was open each week ; it should also contain as many columns as there are classes in which to record the total attendances of each class for each week. Then there should be a column containing the total attendances of the whole school for each week, followed by a column in which to record the weekly average attendance. The next columns should exhibit the number present at all in each week, and the average number of days to each child present at all. These should be followed by columns recording the number of admissions and withdrawals, and the number on the register. Columns should be added which will exhibit the amount of weekly school pence.

On the opposite page of the Summary Register there should be forms corresponding with those parts of Form IX. which have to be filled from the Attendance Registers, and also, if there is space, a copy of the particulars to be entered into the Examination Schedule. These particulars should be gathered and entered at the close of the month preceding that in which Inspection is due.

The former part of the Summary Register should be posted weekly. The times the school was open, and the total attendances from each class, would be transferred from the Attendance Registers. The sum of these should be entered into its own column, then divided by the number of times open, and the result placed in the column of average number in attendance. The number present at all is to be found by abstracting from the number on the registers the number of those that have been absent all the week. The sum of attendances divided by this number will give the average number of times to each

child present at all in the week. The number admitted and left will be obtained from the General Register, and the difference between these two, added to or subtracted from the number on the register of the preceding week, will give the number on the register for this week. The amount of school pence will be obtained from the register of payments.

(d) **Register of School Fees.**—It is better to have a separate register for school fees than to enter them into the Attendance Register. This register should contain a column for the index number, and another for the name of the child, then columns for each weekly payment in the school year, followed by a triple column for the total sum paid by each child. At the foot of the pence columns should be placed the amount received each week. This amount should be entered weekly in the summary register, and at the end of the school year, if the rates vary, the number paying at each rate.

(e) **Registers of Progress.**—The practice introduced by Dr. Bell of registering the progress of scholars and classes is still found in some of the best schools. It is desirable that it should be done in all. Every master should be able to compare the state of a class at one period, and with one teacher, with its state at another under a different teacher. He ought to have data for praise or censure, to suggest inquiry as to retrogression, or as to means of improvement. He ought also to be able to give an account from actual records, not fleeting impressions, of the progress of every child in the school.

The class register of work and progress should exhibit the tabulated results of monthly or quarterly examinations. It should have columns for the index number, name and age of each of the children, followed by columns headed by the subjects taught in the class, then a column for the total marks obtained, and another on which to record the judgment formed on the examination.

The register of individual progress ought to contain a page for each child, to which should be transferred from the class register of work into similar columns the results of each periodical examination. This would form a ledger of progress, in which would be exhibited the whole school history of every child in those subjects that can be measured by an examination.

That teachers may get from these examinations and records all their benefits, it is necessary that they should form a complete syllabus of instruction covering a given period, so that definite work done or attempted in the period may be tested. For dictation and arithmetic the result may be tabulated by placing in a fractional form the number of words or problems dictated, and of errors ; in other subjects the mark should indicate whether the attainment was exact, complete, and intelligent, or the degree in which it was so.

**2. Annual Returns.**—Returns are made annually to the Government to show that the conditions have been complied with, on which annual grants are made, and to determine the amount of such grants.

**Form IX.**—This form is sent to the managers of schools at least a week before the time fixed for inspection. The particulars required should be filled in, and all the signatures obtained before the inspector comes. Delay in obtaining the grant must occur if any point is overlooked, any statement inaccurate, or any signature omitted.

The form consists essentially of three parts. The first requires from the managers a full statement of the school income and expenditure ; the second deals with the teacher and the school, and is to be filled up in most part from the school registers. The part respecting the teacher requires his name, date of birth, and certain particulars in his professional career ; that respecting the school requires to know if "Drill" is taught and by whom, if the children are taught to sing, the number of times the school has been open, total number of attendances made between certain limits of age, the annual average, the highest weekly average, and the number of children who have completed the minimum number of times to entitle them to be presented for the examination grant ; it also requires the dimensions of the school and class-room, the number of children on the register of certain specified ages extending from three to over fourteen, the number admitted and the number left in the year, and the rates of payment ; it requires the provision made for instructing girls in work, and what time each day the principal teacher gives to the instruction of infants that may belong to the school. The third part requires certain certificates to be given by the managers and principal teacher, respecting assistants, pupil-teachers, and candidates for engagement as pupil-teachers.

**3. Log-book.**—A book which should exhibit somewhat the life of a school was often kept by the more earnest masters of the earlier public elementary schools. By the "Code" such a book is required to be kept in every school receiving annual grants. It is to be stoutly bound, and to contain not less than 500 pages. In it the summary of the inspector's report, and remarks made on it by the Education Department, must be copied verbatim. In occasional visits the inspector will make an entry of such particulars as require the attention of the managers. The head teacher is required to make an entry at least once a week of such facts as deserve to be recorded. More than this will be done by teachers who are desirous to collect data for the improvement of their schools and of educational method. Their own daily lessons—the particulars specified ; the examinations with details of questions and results ; the times when experiments or fresh plans in method or discipline are introduced, with a full description of their nature ; special cases of obstinacy or other faults of temper and conduct, and how treated, with any other fact of educational value would deserve to be recorded.

#### VI. Schoolroom: Furniture and Apparatus.

**1. The Schoolroom.**—Its site ought to be healthy, and, where possible, its surroundings agreeable. The size is determined by the number it is designed to accommodate, but in planning a room the following things should be secured. Freedom from crowding, so that there may be sufficient separation of classes and drafts. At least eight square feet to each child in attendance should be provided. Facility of movement for the master and others without disturbing the classes is essential. It is not likely that order will be preserved when the classes are broken into by persons passing. Such a disposition of the desks and standing places should be made as will place the whole school under inspection from any point. Sufficient cubical space should be provided as will secure at least eighty cubic feet to every child in attendance.

The dimensions of a schoolroom have often been determined by mere whim, or from imperfectly comprehending the conditions and requirements of elementary schools. The condition that would limit the width of a school to

the group of desks and sufficient space for a class to be brought out before it is a case in point. Eighteen feet may be suitable for small village schools, but not for the ordinary schools of towns. A better width would be twenty-four feet, as this would allow for better isolation of the drafts, and for the purposes of marching and drill.

The schoolroom should have a pleasant look about it. The associations with it should be agreeable. Care on this account as well as on others should be given to the colour of the walls. This should not be glaring, nor yet dark. In either case the effect would be disagreeable, and nervous depression the result. The best colour is a French grey.

The ventilation of the schoolroom should have the architect's best skill. It is impossible that teachers can work many years in ill-ventilated rooms. The blood gets poisoned and loses its vitality; the nervous system becomes either thoroughly deranged, or so weakened that the functions of the organs are discharged but feebly. Means should be provided for the escape of used air, for the admission of fresh air, and for freedom from draught.

Plenty of light should be admitted. It is necessary to health, and is promotive of cheerfulness. Windows should be placed on three sides of the room, and when the rooms are large on the four. The windows should be large, with large panes, and at least five feet from the floor. Flower-pots with plants may stand in the recess.

**2. School furniture.**—The fittings and furniture of the schoolroom should comprise groups of desks, gallery in class-room, curtains for separation of classes, presses for books, a desk-stand for the master, window-blinds, cap-rails and pegs, sink and tap for washing, roller for towel, mat, scraper at the door, and clock. (*a*) *Desks.* The space allotted to each pupil should be 18 inches. No desk should seat fewer than five, nor more than eight. Each desk should be 13 inches wide, three of which should be level, and have recesses in which to place penholders and pencils. The holes for ink-pots should be placed 18 inches apart, one to the right hand of each intended occupant. The pots should be below the level of the desks, with a long cover having holes at proper distances, sliding in a groove, so that the ink may be preserved from dust when not in use. The other part of the desk should

slightly slope, though not more than an inch on the whole. The heights of the iron supports should vary, unless the desks are placed on a platform. The front desk should not be less than 2 ft. 4 in. high, the second 2 ft. 7 in., and the third 2 ft. 10 in. The seats to the desks should be about a foot lower than the desks. Their width should be seven inches. Under the front desk, and attached to it, there should be a small press in which to keep the books and other things used in the class. The space occupied betwixt the front of the group and the wall should not be less than 8 ft. 3 in. The space between each desk and its own form should not be less than three inches, between each form and the desk behind it nine inches, and between the hind form and the wall 12 inches.

(b) *Gallery*.—To each child should be allowed 16 inches, and there should be a passage on each side of the same width. The distance from the front seat to the wall, in a gallery of six forms, should be 11 ft. 5 in. Using the floor as the first foot-board, there would be five foot-boards each sixteen inches wide, five forms each nine inches wide, and one form, the top, 12 inches wide. The height of such gallery would be made up of five forms rising each 11 inches, and the top one 12 inches.

3. *Apparatus*.—The implements and articles used in school to aid in teaching should be provided in no niggardly way. *Black-boards*, not larger than 30 in. by 24 in., should be provided for draft use. One of these should be fastened in the wall opposite every draft place. They may be of uniform thickness, with a border piece to prevent warping. Larger black-boards not less than 4 ft. by 3 ft. should be provided for use with the class and section. They may be made of a thin panel placed in a frame. *Easels* are the most convenient that are made with double legs. Fastened to each easel should be a small box for chalk, and at the side two rings in which to place the pegs when not in use. It should have a nail on which to hang a pointer and a duster. There should be as many easels as classes.

A letter-box and frame, tablet lessons and stands should be provided for the infants. Other classes should have at least two different reading-books, and in the higher classes books should be used that supply continuous reading. Materials for writing should be good. It is a false economy

to buy poor materials, as the children's progress is retarded thereby. Each child should have a pen-wiper for the sake of economy and forming tidy habits. A ball frame and sheets of tables, the Pestalozzian Tables of Unity and Fractions should be supplied in every school. Of slates there should always be more kept than are in use, so that on a slate being broken a new one may be substituted. To each group of desks there should be provided a sufficient number of pieces of sponge, which should be kept in a small box lined with zinc, and put in the press under the front desk when not in use. They should be prepared for use every morning. No slate in a dirty state should pass from the hands of the children. A box of objects, one of geometrical solids, drawings of geometrical forms, illustrations of natural philosophy and of physiology, prints of foreign costume and scenery, a globe, maps, and specimens of raw material and of articles in process of manufacture will be required for collective teaching and other lessons.

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## CHAPTER IV.

### SCHOOL DISCIPLINE.

DISCIPLINE is a word of twofold force. It denotes all the means and motives employed by the teacher to enforce right conduct amongst the children of a school, and it denotes the results achieved by the use of these means and motives. It puts into operation certain means which are valueless but as they excite specific actions in others. Hence in the use of the term sometimes one force comes into view, sometimes the other, so that the term seems to mean one thing at one time, or with one person, and another thing at other times with other persons. But one who would be preserved from futile efforts must keep both in view. A teacher cannot be too strongly persuaded that only as means and results are linked together, as cause and effect, is discipline real or good.

#### Section 1.—Discipline in its Source.—The Master.

I. Influence.—How powerful is the influence of a master on the habits and character of his young charge.

There is the direct influence of his teaching and discipline, though there is more power in that which is incidental and indirect. "The personal character of the master," it has been said, "produces a continual effect. In a certain sense he is teaching always, and often when he least thinks of it. The lessons which he gives insensibly are perhaps the most availing of all, and it is hardly too much to say that what he conveys without being conscious of has a deeper effect than what is taught more formally. He is constantly imparting his own likeness, reproducing in the minds of his scholars the impressions and convictions of his own. A silent influence is at work which he little suspects. The words which drop unobserved from his lips, the acts which he performs mechanically and immediately forgets, his daily habits and deportment, have their effect, and may be made subservient to the highest ends. The very way in which his school is managed, its order and impartiality, the tone of kindness which pervades it, the reverence openly paid to what is good and true and generous, are so many parts of moral training." It is by these influences that the habits and character of children are formed. They are more powerful than direct teaching, as lessons only enforce what is right, but example allures to the practice of it. But it must not be forgotten that personal influence may be for evil as well as good. Children imbibe the spirit of their master. They will not be industrious if he is indolent, punctual if he is laggard, nor truthful and honest if he only cares for appearance. If, for example, his school is energetically worked in the presence of visitors, but becomes indolent and loose on their departure; if there be special preparation for public examinations; if, in a word, there be an attention to appearances more than to truthfulness, then the influence of the teacher is of a most injurious and evil character. It is thus seen that the *educator stamps his own impress* on the educated. In this respect he might be compared to the sculptor whose genius has transformed a shapeless block into a living beautiful statue; yet, the marble owing nothing to the sculptor but the form impressed on it, the comparison is scarcely accurate, as the human being lacks the passive character of the marble, his inherent vigour and restless energies modifying the influence exerted on him. However, the truth itself is so

patent to common observation, that it has found embodiment in one of our national proverbs, "As the twig is bent, the tree's inclined." The importance of this principle in school work will be recognised by all who remember how impossible it must be for a child to rise higher than the standard set before him; hence the necessity of the masters of schools providing that their pupils' minds shall be placed daily in personal contact with their own.

The importance of these truths is enhanced by the consideration that children are committed to the care of the teacher when the mind is most pliable and the character most impressible. The powers are not yet developed, nor the habits fixed; consequently the character is not formed. Almost any impression can now be made on the mind—almost any feature delineated on the heart. A child is so susceptible of impressions, and so open to the influence of circumstances, that if these were right, and his educators were skilful, his character could almost be moulded for him. But this state does not last. "Some stones when first quarried are so soft and pliable as readily to take any form you may wish to impress upon them, but so harden by lapse of time, as almost, at any subsequent period, to render impossible any further change." So it is with man. His heart feels less, and his conscience yields less, as childhood gives place to youth, youth to maturity, and maturity to age. Again, that intellectual cast, moral tone, and imparation of himself, which we have described, are not, it must be remembered, confined to the schoolroom, but, like the ever-widening circles produced on the surface of a lake by a drop of rain, spread themselves around until the labours and the influence of a teacher are felt through society at large.

**II. Character.**—The discipline found in any school has its springs in the character of the master, in the influence he establishes, and in the feelings he inspires. It depends more on the man than on his means. It is the character of the one that imparts efficacy to the action of the other. Instances are numerous of men of high attainments, and skilful as teachers, who have failed in charge of schools from inability to govern. Sometimes this may have arisen from their low estimate of its importance, and their consequent ignorance of its principles and requirements. In other cases it is the fault of the man. It is not in him.

His temperament, tone, manner, and character unfit him to reign. He is out of his niche.

That discipline has its springs in the character of the master—that it is what he is, rather than what he does, that gives it its character and efficiency—is, in fact, only a general truism with a particular application. Character is the source of success or failure in all pursuits. So apparent is its influence in schools, that one who had many opportunities for observing has said that “a master has more need to watch himself than watch his children, as the evils found in a school are often traceable to some omission, inconsiderateness, hastiness of temper, want of firmness, or absence of principle in himself.” Hence, also, the very general opinion, “As is the master, so is the school;” for, in fact, discipline is a faithful index of his character, and his school a great reflector of its chief lineaments. Discipline, being a system of means and influences for the formation of habits and character, is an indicator of the teacher’s character, by showing the habits or practices to which he attaches little or much importance, by showing his knowledge of mind, by exhibiting his judgment and spirit, and by making known the amount of energy and perseverance belonging to him. So the school becomes a reflector in which the chief features of his character are portrayed: let him govern his school by the mood of the moment rather than from firm and earnest convictions; let him subject it to ever-varying passion rather than to established principles; let him place as its presiding genius a sour and querulous disposition rather than a loving spirit; let his decisions emanate from a hasty temper rather than from a patient and calm judgment,—and in each case he himself will be reflected and reproduced in his children.

It is important to the teacher to remember that character cannot be assumed at pleasure; it is a growth which has its roots in the soil of bygone years: nothing is in the character which has not grown there. The lesson of to-day cannot be said if it has not been preceded by that of yesterday, and many days before it; nor can a man appear in the presence of children what he is not. The thing is vain. Their eyes pierce through every disguise. “No admittance for shams” is written over the doors that open into their assemblies. Heraud says, “Whatever the

true educator should appear, he must really be. The standard proposed for the pupil should be as closely as possible proposed also for the tutor. The same ideal reference is required for both ; with this difference, however, on the part of the educator, that he should exhibit an embodiment of it in his own person." Let the teacher, then, foster the conviction that he must be what he seems, and must seem what he is. Let him strive earnestly by personal discipline for every qualification of a good master.

III. Personal Qualities.—1. Love, honour, truthfulness, sincerity, consistency, justice, patience, and judgment must be elements of a teacher's character if he would have an ascendancy over children both effective and lasting. When children find the love of their teacher to be real ; that his honour can be reposed in ; that he never exposes what he has promised to conceal, nor refers to what he has promised to forgive ; that he treats all alike, without favouritism or partiality ; that his patience and judgment are such that his decisions have not to be reversed, nor his actions regretted,—then they are disposed to obey, and to repose a confidence in him which nothing else could secure at their hands.

2. Earnestness, cheerfulness, and considerateness are other elements, each yielding its special quota to the discipline of the school. Earnestness has great influence over children. This may arise from the fact that the mind in childhood itself is earnest, and is strongly attracted by the same quality in others. Cheerfulness is sunshine, making everything pleasant ; but a cloudy brow, an anxious countenance, or troubled aspect diffuses gloom and depression. Children are apt, too, to interpret such as signs of annoyance ; and when some of them get the notion that they can tease or annoy the master, they are not long without finding the means of doing so. Considerateness in the treatment of mistakes, or of faults, is not without its influence. The teacher who is careful not needlessly to give pain, raise a blush, or excite a laugh, by unnecessary exposure of ignorance, error, or mistake, cannot but secure the respect of his children. So in the matter of rebuke. His influence will be greatly strengthened if he administers it so as to make them feel that it is to him painful to do so, and if he is so careful of their self-respect as to administer it in private rather than in public.

3. Self-control, with its allies, calmness and firmness, are qualities never absent where discipline is good. Self-control is manifested by manner : manner is an index to temper. Here the children read whether discipline springs from principle or impulse—whether the master has their well-being in view, or merely his own comfort. The face, eye, voice, movements, proclaim the kind of will possessed by the master. Tell-tales of the spirit within, they show unmistakably how far he has control of himself ; and if he has not that, he cannot have it of his school. Calmness is an evidence of self-control. It is a sign of power. Violence ever defeats its own purpose. It conveys the impression of conscious weakness. A teacher should never bluster, never bully, never scold. Children will yield to the force of a calm act, when a hurricane of words would rush idly by. A quiet mode of speaking is more effective than a boisterous one. Firmness is that aspect of self-control which regulates dealings with others. It is required in the teacher as a source of strength to the child. That which gives way is not a support. A child needs a support to its resolutions, and that support is the teacher's firmness. If he gives way, the pillar is broken. Besides, a teacher who vacillates places himself on a level with the child. Vacillation is always injurious.

4. Habits of neatness, punctuality, diligence, and vigilance are essential to good discipline. In appearance, the master should be an example of neatness and cleanliness ; avoiding what is foppish on the one hand, and what is slovenly on the other. If in dress and personal appearance he shows no respect for the opinions and feelings of others, he cannot with consistency, or with effect, enforce attention to them by his children. He should be at the school to receive his children, and not let them wait, as is the practice with some teachers, in the streets, and sometimes in the rain, to receive him. He should be at his post at least a quarter of an hour before school-time, to see that his monitors prepare books, slates, chalk, and other apparatus for the work of the classes and drafts. His punctuality should extend to the closing of the school, and to the beginning and ending of lessons : few things are more subversive of discipline than allowing a lesson of one class to intrude into the time of another. The working of an elementary school, involving as it does instruction in a great variety of topics

to children of very dissimilar ages and attainments, and involving constant oversight in order that all shall be faithfully employed, cannot be effectually carried out without *general diligence* on the part of the master. Whoever else idles, he must not. He has no time for any thing, person, or subject, but his school, his scholars, and their instruction. Let him begin to play, and the contagion spreads to all his classes. Not a moment in school should witness him unemployed, or employed in things foreign to his office. He should be able at all times to draw attention to himself as an example of diligence and faithfulness in the discharge of his school duties. Vigilance is necessary to discipline. Without making prominent that he is doing so, the master should see everything that transpires. His presence should be felt everywhere. The children should feel that it is impossible to impose upon him, or escape his notice.

**IV. Characteristics of discipline as affected by the master's character.—1. Uniformity.**—This is essential, if discipline is to be effective and beneficial. Its value may be gathered from considering the effects of its opposite. A lax rule one day, and a tight one another,—punishment, angry remonstrance, or reproof at one time for what receives no attention at another,—conduct depending, in fact, on the mood or impulse of the moment, cannot fail to make children careless and impulsive ; or, which is worse, to throw into their moral judgment a disturbing element as to what really partakes of the nature of duty. It is uniformity that gives force to law, and secures to it proper respect. It is the uniformity of Nature's sequences that obtains attention to her requirements.

**2. Discrimination** —Discrimination in the distribution of rewards and punishments, of praise and blame, and in the use of other motives, involves serious consequences to the characters of children. The master who makes no distinction between those who have had many advantages and such as have had few, is guilty of injustice, which the objects of soon discern and resent. Much more blamable is he who lavishes praise on the naturally gifted for what has scarcely cost an effort, and withholds it from the dull plodder, who after continued and laborious effort has nevertheless failed. Surely, of the two, the latter is the more deserving of praise ; and who can estimate the

power of a kindly word or an appreciating look ? But in the case of punishment, who can award the degree of blame for want of discrimination ? What must be said of the master who does not discriminate between offences from ignorance or forgetfulness, and those done wilfully ? What must be the condition of children where no distinction is made betwixt moral offences and those against order, but both receive the same kind and degree of penalty ? Or what must be said of those cases in which offences affecting the master's convenience are visited summarily and severely, but moral offences are winked at, or but slightly noticed ? What can be the influence of the discipline in such cases but to confound children's moral perceptions, and to weaken their conviction of the obligation and supremacy of moral duties ? Of a different tendency, but also injurious, is treating a child irrespective of its temperament and disposition. If the treatment be not adapted to these, the child may become regardless of it, and, consequently, of the duties it is intended to enforce.

3. **Impartiality.**—A child cannot attach much importance to that which is not applied to all alike. Impartiality tends to produce the conviction that the discipline is founded in right, and that the duties it enforces are obligatory on all ; but partiality must produce the impression that it is a mere matter of convenience or expediency, to be set aside by personal considerations or mere whims. In the matter of punishment especially must it be felt that the master is impartial. Sometimes for the same kind of offence he must award different punishments, because of the difference in the character of the offenders ; but in these circumstances it should be felt that the punishment is as severe in the one case as in the other. This will give confidence in the justice of his decisions, and acquiescence in the discipline will be more willingly rendered.

4. **Kindness.**—Discipline, animated by the spirit of kindness, is proverbial for its influence. It has charms for the worst natures, it has subdued the most obstinate tempers. Where it exists, the children will be incited to praiseworthy conduct. They will be put on the path of self-improvement. Offences will be prevented, unnecessary temptations will not be thrown in the way of the weak. Pains will be taken to enlighten the conscience, and to carry the intelligence and will along with the

master. And severity will be avoided,—severity, whether in exacting more than children can bear, or in the infliction of brutal punishment.

### Section 2.—Discipline in its Objects.

If he would be successful in realizing proper results, the master must take a broad view of the objects he has to accomplish, and must keep before his mind continually both the objects themselves and the means to their attainment. Neither should he forget that the results he achieves may be justly regarded by those concerned in his school, both as a test of his discipline itself, and of his breadth of view as to its objects. The objects of school discipline may be roughly enumerated as order, attention, diligence, obedience, resistance to temptation, self-denial, self-reliance, subordination, respect for the feelings and rights of others, and the motives to be implanted in children as grounds of action.

I. Order.—“Order is heaven’s first law;” so it should be of the school. It is at once an end and an instrument of government. Hence order, then instruction. It consists in having everything in its right place, and everything at its proper time. It requires regularity in the movements and uniformity in the positions of the children. It is not perfect without thorough industry on the part of the children, and complete control on the part of the master. Yet there must not be a morbid concern for appearances, such as, by perpetual interference, would defeat its own purpose, and check the progress of the school. In a busy school, a master may be content occasionally to sacrifice somewhat of its appearance; for the most careless onlooker could distinguish between what was the result of genuine work, and the idle, lounging, slovenly appearance of a disorderly school. Quietness, too, is desirable, though in some exercises difficult to attain; but good order does not consist in quiet. A school may be quiet, yet most disorderly. A school may be too quiet. Moseley mentions a school so quiet that the children were afraid to think, lest they should disturb it. Quiet is not the normal condition of childhood. Ever restless, ever seeking something new, ever desirous of employment, ever prone to express its feelings,—an everlastingly quiet school is un-

natural. Certainly quiet, when needed, or when ordered, is an essential element of good order ; but the busy hum from little voices and little hands intent on work is quite as essential. Drones are all very useful in their way, but the workers make the honey. The temptations to *idle noise* are fewest where children have suitable and sufficient employment. But the noise of a good school is generally the result of the energy thrown into the teaching ; to lessen this *if possible*, and to produce an air of quiet diligence, the following things will need attention. The master's own voice should never be heard in the school except in teaching. Should he deem it necessary to address a boy or a class, it should be in a quiet tone, so as to be heard only by the parties addressed. All movements and changes should be accomplished by a well-understood set of signals. In draft or class instruction, the voices of the teacher and children should be no louder than is necessary for all in the class or draft to hear. On the first appearance of undue noise, the duties of the school should be suspended and quiet produced.

Every teacher will have order who shows himself determined to have it. But he will be aided in his efforts if he practically exemplifies the love of it in his own person. Much will be done towards it by furnishing each child with something to do, and a motive to do it. Stated periods of change and drill, and having all movements simultaneous, whether throughout the school or in the class work, will be found helps. And having a body of monitors or curators, charged with the supply of everything necessary to the working of the school, will much tend to secure it.

**II. Attention.**—Attention under actual instruction, depending on the matter and method of the lesson, is not that now contemplated, but rather that habit of mind in which the whole force is bent to whatever may be the duty of the hour. This quality is a necessary condition to healthy, vigorous, and thorough progress in school work ; at the same time it is a quality so valuable in itself, that it is one of the most important elements of character that school education has to form. Like other habitudes of mind, it is a thing of growth, and demands much discrimination in dealing with, both as regards age and natural aptitudes. As regards age, it is but slowly that a

child acquires strength of brain to sustain the strain of constant work. Nothing so fatigues the brain as attention to what is new ; consequently at a period when all is new, or nearly so, and when the brain itself is immature, it must soon give way under the act of attention. Besides, it is only as experience forms the intelligence, and practice supplies the power, that any one can give attention on demand to any subject, to the exclusion of everything extraneous. How vast an acquirement this would be in a child, whose volatility is naturally so great, must be apparent to every one who considers how little it is possessed by the majority of adults, even among those whose pursuits are most favourable to its existence. Then of natural aptitudes. When a subject has in itself an attraction, there will be required no stimulus to secure attention to it. It is when a subject has no attraction in itself, or when it is possibly distasteful or irksome, that there is needed the presence of a strong motive, until the power of habit makes it comparatively easy. Now, as aptitudes and tastes differ, that which is distasteful or irksome in one case may be attractive in another ; hence the need of discrimination, not only in the application of motives, but in judging of results. The formation of such a quality of mind is a difficult matter, but to be constantly pursued ; for the power to give attention to anything, however irksome or trivial, is more nearly allied to success in life than anything else.

III. Diligence, or continued application, is very nearly allied to attention. Like it, it must be sought for its own sake, as well as for its importance to the work of the school. The obstacles, where they differ from those which impede the growth of attention, proceed either from indolence or irresolution, the former constituting feebleness of desire, the latter feebleness of will. The power to concentrate the mind on the duty of the hour is not only valuable in itself, but is absolutely necessary to progress in school work. In order to get the habit, the pupil must be accustomed to work requiring *patient investigation*, and he should have fostered in him *indifference to drudgery*. He should be accustomed to long, vigorous, and it may be irksome employment ; he should be trained to look with scorn on the idea of shirking work because it is distasteful. The business of life presents much irksome employ-

ment. In every situation there is labour exacted that is not at all desirable, yet must be done. For such employment school ought to prepare him, and it can only be done by exacting from him continuous labour, to the drudgery of which he is perfectly indifferent. He should also be encouraged and stimulated to the most *strenuous exertions of his mind* on all the subjects which are brought before him.

The habit of industry which characterises any school is at once a sign of order and a test of its moral tone. To secure such a habit, it is not sufficient merely to find employment for children, unless such employment is intelligent, suitable, and constant. To secure that employment is so, there must be variety, a definite amount, supervision, revision, and advancement. Variety is essential, because the power of continuous attention, in children, to one object is weak. A definite amount of work in each lesson, or for a given period, furnishes a motive to diligence, and provides a test for it. Supervision is required, because temptations to idleness and indolence amongst children are many. Revision is essential to secure the diligence both of the children and the subordinate teachers. Advancement from class to class, and from section to section, is necessary as a reward to the diligent and a spur to the indolent.

The following are amongst the means by which the teacher may promote habits of diligence amongst his children. By a careful *classification of the children*, according to intelligence and attainments, in drafts, classes, and sections. By a skilful *graduation* of the subjects of instruction to suit the different states of the children. By marking out for each *class* a definite amount of work to be accomplished in a given period. By dividing the school hours into equal portions, say of half-an-hour's length, and assigning to each a distinct lesson, involving change of place and subject at the end of it. By appointing certain parts of each day for revising the lessons prepared in class, and for supplementing such instruction ; by examination of the classes at the end of short fixed periods, for the advancement of the proficient; and of sections at longer periods, for removal into higher sections ; and by registering at each examination the state and progress of each child, in a book prepared for the purpose, and on a card for the inspection of the children's parents.

#### IV. Earnestness and Accuracy in School Work

1. **Earnestness.**—To secure earnestness you must present to the mind an object that is valuable, desirable, and attainable. Much of school work is unappreciated by both parents and children, as they cannot see its bearing on themselves and their interests. Let such a connection be established between school work and the interests of the family, and it becomes at once valuable and desirable. Hence the work of a school should be practical. The instruction should have relation to the things of every-day life. Opportunities should be frequently furnished of putting their knowledge to practical use. They should be thus made to feel that what they acquire is valuable : its connection with their own interests will make it desirable, and if put in a familiar, practical, experimental manner, they will see that it is attainable. Children should be made to *do* as much as possible, and every genuine effort should receive its meed of praise, that they may feel conscious, although the result may be small, the attempt will not go without its reward.

2. **Accuracy.**—To secure accuracy, the following things are necessary :—Let there be a definite amount of work appointed for each lesson. Impress the children that to do a little *well* is worth more than doing much *ill*. Revise all the written exercises very carefully. In such a case as incorrect spelling, require the misspelt words to be written a certain number of times correctly. In arithmetic, let the children not count *as done* any example whose answer was not right in the first operation. In the examination of a reading lesson, let the *very words of the book* be required in the first instance, the putting the substance in their own language being afterwards obtained. Use books rather than slates for all written exercises in the higher classes.

V. **Obedience.**—The habit of obedience is one of the first elements in the formation of character. Early obedience lays the foundation of self-control ; for as acts of obedience depend on the will of another, early obedience is yielding to the will of another, and thus is a restraint by the child on its own inclinations and desires. The character of obedience depends on the motives from which it proceeds, and its influence on the child's character will be

determined accordingly. Three kinds of obedience may be distinguished :—

1. **Constraint.**—This may proceed from hope of reward or fear of punishment ; and though in the absence of a higher kind it is not to be despised, yet it cannot be depended upon, being thrown off when the restraint of the teacher's eye is withdrawn. It is a sort of obedience whose tendency is to evil, as it is often a cloak for hypocrisy.

2. **Habit.**—This is where obedience is secured by a skilful use of natural principles. A child likes to be an object of affection, and likes to love, and under these conditions yields obedience naturally. The sense of dependence, arising from its ignorance and weakness, inclines it to obey. Sympathy with its associates leads it to act as they act ; hence obedience is yielded at once to a command addressed to all. The frequency and regularity with which things are done lead children to regard them as natural requirements. Acting on these things produces a habit of obedience ; but such obedience is only the obedience of childhood,—an obedience, if nothing besides is attempted, that leaves the character enfeebled, and the child the sport of every one whose will is stronger than its own.

3. **Duty.**—The highest kind of obedience is that which places the will under constraint yet free, submissive yet independent—the obedience of duty. This implies that the will is in unison with what is right,—that it proceeds from principle, not from habit or fear.

VI. **Behaviour.**—Decorum or propriety of conduct is the result of habit rather than of rule, yet the teacher may do much to secure it by frequently *directing the attention* of the children to the subject ; by such dispositions of the children as will impress them in favour of neatness and order ; by checking the first deviation from right posture ; by allowing no improper familiarity towards himself ; by requiring courteous treatment of each other, and by noticing with displeasure the slightest rudeness towards himself or the children. In addition to these things, the children should be *taught* that a good posture is healthful, but a lounging one the reverse ; that inattention is *rude* and *unkind* ; that boisterousness is highly unbecoming, and that in all their intercourse with each other and their teacher, they should act as they would be

expected to do if men. Praise judiciously bestowed has great influence on the manners and habits of children. Acts of courtesy, when witnessed by the teacher, should receive praise. As a general rule, a teacher should be on the look-out for things to praise rather than for things to blame.

Well-timed instruction on instances of kindness, consideration for the feelings of others, answering before indicated, prompting answers, taking things rudely, and such like, would make clear to children the feelings which should regulate their intercourse. But example is better than precept. In fact, the example of the teacher here, as in other things, will give the interpretation to the precept. The teacher should be a gentleman. He ought to exhibit in his own conduct those rules, principles, and feelings, to which he desires his pupils to conform. Very important is the tone of the teacher's intercourse with them. Courtesy, gentleness, kindness, considerateness, affability, should mark his bearing towards them. He should shun whatever is rude or coarse in manner and language. He should avoid sarcasm, sneer, and ridicule, as these soon dry up the sympathies of children. Nor is such gentle, courteous, considerate treatment incompatible with the authority he must exercise as master. Here, in fact, is a stronghold of authority. When children are treated rightly, it often becomes a point of honour to yield the submission that is due.

Courteous greeting when they meet in the morning, the bow on entering the school, and again on departing ; courteous recognition of the teacher by the pupil in the street, to be returned, of course, by the master, who must not be outdone in politeness ; handing a chair or a book to a visitor, are points that will require attention. Cleanliness of person, neatness of dress, attention to shoes, must also be pressed as a part of social duty, as showing consideration not only for one's self, but also for others.

Whether children should rise on the entrance of visitors is a point on which there exists a great difference of opinion and practice. It is deemed by some as the best means of training to right behaviour, and as a practical exemplification of "ordering one's self lowly and reverently to all one's betters." So also is the practice of requiring the children to bow to supporters of the school when met in the street.

It is doubtful if either practice accomplishes its end. Certainly to the first there are grave objections. The children have work to do, and their attention should not be diverted therefrom. No general movement should take place in a school but on some signal from its master, or authority is perilled. Besides, in most schools where the practice prevails, it is done only to some few of supposed higher position than others ; hence the children are taught to be "respecters of persons" rather than trained to be "courteous to all." If it is done at all, let it be done to all. Let it be done to a chimney-sweep or to the parent of the poorest child in attendance. But we believe that some simple act of courtesy performed by a child at the command of the master, and a right demeanour of the master to his visitor, will do more for good behaviour than the complete suspension of the school-work, accompanied by the acts of rising and bowing.

**VII. Preparation for life.**—1. The daily intercourse of school, and the nature of the circumstances in which the children are brought together, offer opportunities to implant principles, and to form habits, which are alike necessary to their own happiness and to the well-being of society. The school is a little world in itself. Here are the weak, the ignorant, the wayward, the wilful, the obstinate, it may be the vicious, as well as the well-intentioned. The interests of the children often seem to clash, just as in the world outside. Practical lessons thus become possible in subordination, self-denial, forbearance, respect for the feelings and rights of others, gentleness, and self-reliance. In dealing with children in all these respects, it is not by prohibitions of particular acts, or even by their commendation, but by implanting a general rule or principle of conduct, that most good will be effected ; *e.g.*, the sense of justice, if implanted in children, would exclude the necessity of prohibiting what would be a violation of it.

2. The most important result of the discipline to which a child is subjected is the character of the motives that will in the future sway his life and conduct. In illustration of what is meant, take the following. The results of a certain kind of discipline would probably be to make one child a sneak, another a bully, another a combination of both, being one or the other according to circumstances ;

another two-faced, another bashful and timid, another untruthful, another tyrannical, and so on.

The motives entering into the character of a child do so in two ways. (a) Many motives are so skilfully adapted to the child's nature as simply to strengthen its tendencies until their hold is irresistible ; e.g., praise appeals to two natural feelings—love of approbation and desire of power. Now it may be so often administered, and with such little discrimination, that the love of it may become predominant, so that nothing will move the individual to act except it yields its meed of praise ; and even ordinary engagements will be abandoned, or languidly gone through, when the stimulating zest is absent. (b) Some motives are so little adapted to the ends which ought to be sought, that a totally opposite condition is brought about. For instance, a master wanting an immediate effect may resort to means which, while securing his present end, produce a disposition which is the very opposite to what he ought to seek, and equally opposed to making his present end a permanent condition ; as when one employs means to get attention to lessons, which, though successful at the moment, excite strong disgust for them, and cause all such pursuits to be abandoned when school life is over.

### Section III.—Discipline in its Sphere.

Discipline finds its sphere in the nature of the child ; in its instincts and propensities ; its emotions and the principles that grow out thereof ; and in the law of habit. It has to utilize certain instincts and to bring them under control for the benefit of the child ; it has to regulate the propensities so as to strengthen or weaken their influence over his conduct ; and it has to cultivate certain emotions or sentiments until they become principles of action, and habitual in their operation. These instincts, feelings, and emotional principles embrace such things as activity, and the tendency to trust and love ; the propensity to imitate, to construct, to acquire, and to associate ; the feelings of beauty, of novelty and of wonder, the emotions of hope, fear and power, and the feelings which prompt to work for the good of others. Our limits will not allow of systematic treatment of all these susceptibilities, but a few may be briefly discussed.

#### I. Action.—1. Craving for Exercise.—For active

bodily exercise there is a natural craving. This feeling is an appetite—it springs from a condition of the muscles and nerves. When this condition is on, there is a strong tendency to movement, and a strong inclination to action. It is a strongly marked characteristic of childhood and youth. Sometimes the demand for exercise is stronger than at others. This may arise in several ways. There may have been a period of forcible repression, during which there has been an accumulation of so-called animal spirits, until restraint seems impossible; or there may be a state of high health and elasticity. In school, each of these phases may be looked for,—the craving which comes on after a season of repose, the pent-up stream, and the freshness of youthful vigour. Restlessness is a sign of the first. After a short interval of repose, or of forced inaction, there is a growth of uneasy feeling—restlessness follows, and its companions, inattention and annoyance to others. Of course it is necessary to train the child to put restraint upon itself, which it may be aided to do by strongly interesting it; or it may, on exceptional occasions, be necessary to inflict pain, this acting as a counter-irritant; but the wisest plan is to afford relief as speedily as may be. An effectual remedy would be found in standing erect and stretching the limbs to the utmost. Pent-up feeling, and the freshness of youthful vigour, require more than simple relief. In the old schools they found vent in outbreaks; in the present day they are utilized, and by means of the march, the clap, and the song, are made to help to habits of obedience.

Temperament affects this craving for bodily exercise. The active temperament is one in which the normal condition of the organs is one of great freshness; the phlegmatic temperament, in which both body and mind are wanting in exciting stimulants. The former has to be put under restraint, or the activity directed into a useful channel; the latter requires the application of stimuli. This shows the difficulty of dealing with certain cases of conduct in school; for the phlegmatic, having no difficulty in putting restraint upon himself, will often appear better than one of an active turn, with whom it may be a perpetual struggle to do so, and always a victory if he succeeds.

2. **Love of Activity**—Besides the craving for bodily exercise, there is an instinct for employment, and a ten-

dency to seek occupation, of a more purely mental character, often termed love of activity. To this feeling, not a little enhanced by the corporeal condition, is due in great measure the development both of body and mind. The mastery of the limbs, the control of the organs, the knowledge derived through the senses, the growth of intelligence, are all more or less the result of that craving for employment which is so marked a feature of human nature. Active employment—occupation for the hand and the head—is essential to happiness and to life. Miserable would be an existence in which there was no work.

Recognising the existence of this feeling, the master must provide occupation for each child. As children must be doing something, he must open proper channels for their activity to vent itself ; or, cramped, constrained, and unhappy, they will become troublesome and mischievous. Sometimes the teacher may err in giving employment unsuitable to the age. So doing, he will defeat his object ; for, conscious of inability to do the prescribed work, the children either seek more congenial employment, or form habits of inattention, trifling, and indolence. He may err by exacting too much. Love of activity is not the only principle in human nature, not the only source of pleasure. Repose, after fatigue, is as sweet as active exertion. In fact, the feeling, desire for action, dies out under incessant application, and the craving for repose or change takes its place. Dealing with this activity is a test of a teacher's governing faculty. In the hands of one who knows his business it is one of the chief engines of government. He turns it to account, so as to secure attention, diligence, steady application, and regular industry. By its means, children are kept out of harm's way. Faults are prevented, and bad habits avoided, and the necessity is saved of appealing to inferior motives, or such as might deteriorate the character.

**3. Propensity to imitate**—Imitation is the power of doing as others do ; that is, it is the power to assume their actions and expressions. It implies that there is command over the bodily organs, so as to produce exactly what is done by another. Such a power is obtained only by degrees. But there is a propensity to imitation in human nature, and more, there is an acquired tendency in many cases, so that at length it becomes an active and

governing principle. It is not difficult to account for the ascendancy of this principle in children. It is natural that they should suppose that the actions they witness yield pleasure ; if they can successfully produce them, there is the consciousness of power ; and the pleasure from this is all the greater if the action imitated is that of a grown person, and there is the feeling of sympathy, which leads naturally to the assumption of the feelings and states of others. These things account for the growth from an incipient tendency to a ruling principle.

Its early operation shows the necessity of having what is mechanical acquired at an early period, or habits of another kind will be formed, which it will be difficult to uproot, and which will prove hindrances to progress. It is a good agent in establishing the habit of obedience. A child more readily attempts what it sees done than obeys a command addressed to it in words. This may be partly because it comprehends better what it sees in action than what it hears in words, but chiefly that the appeal by action is to the tendency to imitate. The appeal is almost irresistible when it sees many doing precisely the same thing. Hence, simultaneous action, drill movements, and imitation of motions made by the teacher, are essential parts of the discipline of a school. Imitation is a powerful instrument in forming the morals. The influence of moral stories in cultivating the moral nature, and the influence of example and companionship, are greatly due to it. Sympathy, association, and natural tendency furnish grounds why such stories should be of good rather than of evil. The same may be said for companionship.

Example, especially that of the teacher, owes much of its power to imitation. Children can interpret the precept only by the practice ; hence, if these disagree, the latter not merely neutralizes the former, but actually fixes in the mind another notion than the one intended. Much of the power of the teacher's example is due to the sense of importance and power felt by a child who has successfully imitated one so much superior and older than himself. That the influence of his example may be uniformly good, it must be consistent. No action of the master's in school but has its influence. Often when he least thinks of it, his influence is greatest ; hence the necessity of his being real, and of his continually striving to reach excel-

lence of character. Nor must he disregard the mode of his actions ; it is not sufficient that he is right, it must appear that he is so. Often in future life the recollection of his teacher's conduct on particular occasions will come up to decide the pupil for good or evil.

4. **Working to an End.**—Working to a definite end is the most engrossing, the most comprehensive, and the most effective, as an educational agent, of all the active principles. To all the other stimulants to action it adds contriving means and exhibiting skill in working out the proposed end. When a distant object is to be obtained or avoided, the will is prompted to action, a course of operations is contrived and entered upon, and the consciousness of progress stimulates exertion ; then the nearer the approach to a successful issue, the greater is the interest, and the more active the mind, until at length success yields intense pleasure. Such a state cannot but be favourable in educational processes.

Difficulty and uncertainty in the issue have much to do with calling forth and sustaining the emotion. Where these elements are not, the stimulus is weak. A strong man scorns to wrestle with a weak one, a skilful player finds no interest in playing with a novice, a lad treats with scorn work having no difficulty, requiring no effort, demanding no ingenuity. The time, also, spent in working to an end is an important element. The interval between the commencement and the issue must not be too long, or the interest may flag, and the efforts subside. A work that includes several distinct ends in its course is found the best stimulus.

The educational bearing of this mental law is important. Here is the reason for exciting curiosity before imparting information. Curiosity once roused, the learner is all eye, all ear, until the mystery is unravelled, the truth demonstrated, or the victory achieved. Here, also, is the reason for setting clearly before the mind an exact definite object of study, giving the learner the first notion as to what his mind is to be employed upon. Here, also, we have the importance of adding the element of difficulty to school work,—not, as is the modern practice, of removing it altogether from the scholar's path. But, above all, we have the truth that, to make the school a continual scene of pleasant excitement, to ward off monotony, and to

prevent the encroachment of weariness, this principle of working to an end must be ever alive, in every part of the school, at every moment of the day. Let it be remembered that it is this principle which gives their greatest charm to the sports of the playground, and there can be no denial of its importance in school. Abbott, in the first chapter of the "Teacher," finds that it is from the observance of this principle that one teacher finds intense pleasure in his work, where another, from its neglect, only meets with weariness and disgust.

**II. Knowledge.**—The feelings excited by the pursuit and attainment of knowledge, being of a highly pleasurable nature, may be made productive of activity and energy in school-work. The mere exercise of the mind on proper objects gives pleasure, and this remains as a stimulus to exertion on other occasions.

**1. Novelty, Wonder, Surprise.**—Whatever is new gives pleasure on that account, if it be not in itself disagreeable. South says novelty is "the great parent of pleasure, and is that which makes men so much pleased with variety." Novelty is more than mere freshness ; it is something unexpected. A thing old in itself is a novelty to one totally unprepared for it. In this consists its power to excite the mind.

Wonder and surprise express essentially one feeling, the difference being only in degree. The former is the stronger feeling. When something is brought to our knowledge out of the ordinary course of our experience, something for which we are totally unprepared, we experience a sort of shock, stronger or weaker according to circumstances, which we term wonder or surprise, which is pleasurable or painful as novelty or inconsistency excites it. These feelings are most readily excited in early life.

In using these feelings, the means must be legitimate. it is a strong objection to some of the fact-teaching of the present day, that it takes off the bloom, and robs of their charm the studies of later life ; the appetite is sated, not whetted, and one of the inducements to studious pursuits is removed. Appeals to these feelings must not be too frequent, else there may arise a love of the marvellous, a tendency to untruthfulness or exaggeration, and unfitness for truthful observation. That which is an every-day

experience will cease to attract unless there is a pungency added to it, the "mixture of a lie" alone yielding pleasure.

2. **Similarity.**—Some of the purest pleasures arise from the discovery of similarity where it was not expected. The feeling is that excited by novelty, but has greater pungency. If likeness between objects lying far apart is discovered or pointed out to us, we are arrested, startled, excited, pleased. The attention is arrested and held fast by a fascination that cannot be resisted. The mind is roused to action, and impelled to further exertion. It is not necessary to wait to a late period for these agreeable surprises. Reading lessons, geography—as taught in "a traveller's wonders"—history, biography, poetry, and natural history, abound in the material.

3. **Difficulty overcome.**—Anything in mental work that has been a difficulty, when solved, yields pleasure. There is in this feeling that of gratified power, an emotion which makes difficulty a stimulus to exertion. It is in the same way that the consciousness of progress is an incitement to increased activity. Such consciousness can only be possessed by one whose attainments are real and clear to his own mind. A rapid pace of acquisition may be fatal to it.

4. **Curiosity.**—Curiosity is a desire to know. It is partly instinctive, but much more a result of the gratification experienced in connection with past acquisitions. Properly fostered, it merges into the desire of knowledge for its own sake. Employed on trifling and indifferent matters, its tendency is to take on the form of inquisitiveness without a definite purpose; and allowed to run riot, it degenerates into prying into other people's concerns. In its legitimate sphere it is a powerful auxiliary to the teacher. It is when the mind has been brought to ask a question, that the best condition exists in which to impart instruction, or to put it on that course of labour which will lead to its solution.

III. **Superiority.**—Certain feelings which spring out of comparison with others, and from a sense of superiority or inferiority thence arising, have great influence on the character, and furnish strong motive power to the will. Power, emulation, envy, ambition, form one group; self-esteem and love of approbation, with their allies or modifications, a second.

1. **Power.**—This feeling is one which exhibits itself early. It has its germ in the production of an effect, or the attainment of a result, which suggests the idea of strength, skill, and superiority. When the emotion is experienced there is a feeling of gratification, a confidence of ability to produce the same effect at any time, a confidence which gives a calmness, vigour, and command that materially aid the accomplishment of the result ; and there is besides a desire to achieve higher results, with a firm belief in the ability to do so. That such are the effects of the emotion is shown by the opposite state of failure, and especially of repeated failure. Confidence in self is shaken, the mind is humbled, and its tone is altogether depressed. This emotion may be experienced in two ways. If the present is compared with the past, and there arises a consciousness of superiority over average performances, with a conviction of growing ability, there is a modified experience of the emotion, not without its value as a stimulus to increased exertion. But it is in comparison with others that the emotion is most powerful. Yet even here it depends altogether on the standard of comparison ; a slave compares himself with slaves ; a soldier, not with civilians, but with his compeers. Hence, in school, lads who excel their fellows should be removed to a higher class.

The tendency to mischief is one of the earliest manifestations of the emotion of power, often strengthened by injudicious interference, which turns it from exercising itself on inanimate things, to tease and annoy those who would prevent its exhibition if they could. Cruelty to inferior animals is simply the same emotion, and springs from the same cause, consciousness of superior strength triumphing over resistance. At first it is no more, but unless checked it will become the disposition. Acts of tyranny by boys over girls, or big ones over little ones, grow out of the same feeling. These should be prevented, and those who are the objects of them should be encouraged to resist.

2. **Emulation.**—This is founded on comparison of one's self with others who are engaged in similar pursuits, and of a sense of their superiority. It consists in the desire to equal or surpass others, combined with the effort to do so. Its design is not that others may be distanced, but that we may excel. The desire of excellence is the end to which

the desire of superiority tends. The true nature of this feeling may receive some illustration from the feeling of envy. Both, in their immediate purpose, aim at being on the same level with another ; but the first by raising one's self to another's standard, the second by bringing others down to our own.

All acknowledge this feeling to be a powerful means of influencing children ; yet, of all means employed by the teacher, few have met with so entire a condemnation. It has been said to be contrary to Christian morality, and a source of almost every moral evil ; that where it is employed, selfishness, envy, a desire to take advantage of others, ill-will, and other bad passions, follow in its train. If this be so, its employment by the teacher is out of the question. But, as a matter of fact, its influence cannot be destroyed. Where children are properly classified—that is engaged in a common pursuit on competing terms,—it is scarcely possible to prevent—if there is life at all—one striving to outstrip another. This shows it to be a natural feeling, and as it does not necessarily imply a disposition to retard others, only to distance them, it deserves to be fostered. The object of the teacher must be to give it a right direction. Let him often point out that it is not distancing his companions that is the proper object of ambition, but the achievement of excellence itself in whatever pursuit he may be engaged. Let him often place before them the examples of those who have risen to eminence in various departments by their habits of self-help, and their incessant exertions to excel. Let him often compare what they have reached with what remains to be attained ; and while he praises their past, let it be in such wise as will yet more stimulate them in future.

**3. Ambition.**—The desire of distinction, though varying in its objects and expressions, belongs more or less to every mind. It is in operation often where it is not suspected. Its educational influence depends on its objects ; if the objects are worthy, then its influence is good, not only because it stimulates to effort until the end is gained, but because the desire to be distinguished in worthy pursuits is itself exalting and ennobling. Directed to unworthy objects, it may operate as a bar to all real advancement by filling the mind with trifles, or it may be the source of much evil by leading to disregard of the

comfort or right of others. The good teacher will aim to lay the basis of an ambition to be distinguished by probity, integrity, trustworthiness, and the discharge of duty in all the relations of life.

4. **Love of Approbation.**—There are few feelings so frequently called into play as this. There is an almost unbroken continuity of appeal to it. Is this legitimate? In its primary intention its object must have been to incite to personal excellence and active usefulness, but in the present condition of human nature its real moral influence must depend on the character of the persons whose approbation is sought, and on whether it is the *end* in pursuit. To care for the favourable opinion of others is often a safeguard from evil courses, but to make it the end of exertion is to lay the basis of a character in which may be found everything mean and contemptible. Care should be taken to impress the child that the value of approbation depends on the character of the person that gives it, and it should be trained to do things deserving of approbation rather than for approval.

The tendency of frequent appeals to this feeling is to foster ostentation, and to destroy the charming simplicity of childhood. Nothing in the child where it reigns is childlike. In everything, even in the most sacred things, "How am I engrossing attention?" will solely occupy his own. Unduly excited, its tendency is to weaken truthfulness, and to induce a care for appearances, not reality. To be thought well of, not to be so, is sufficiently satisfying. Besides, there is a strong temptation to put on false appearances, to exaggerate, and to lie, to gain the so much coveted applause. The oft-recurring inducement, What will others think? by its perpetual appeals, tends to destroy all originality, all independence, all daring to be singular. It also tends to produce a false standard of conduct—the opinions of others rather than the sense of duty. What a risk is run when one so trained is thrown into the world! Accustomed to regard the opinions of others as the regulator of his actions, how is he to be preserved from evil courses if the opinions of those around him are in favour of such? How consistent he is likely to be, and yet what a changeling, his actions ever varying, but his principle always the same!

5. **Self-esteem.**—The principle of self-regard may be

deemed instinctive. It was implanted to preserve us from injurious actions and principles ; but when injudiciously fostered it gives rise to some of the worst features in human character. Of these the feelings included under the term self-esteem are common manifestations. Self-esteem is not necessarily evil, but it may easily become so. It is the feeling which springs from the possession, and sometimes from the credited possession, of qualities which in others excite esteem and admiration. The group includes such states as self-consciousness, self-complacency, self-preference, self-conceit, self-confidence and self-respect.

This class of feelings has ever been regarded as one of the most important agents in education, because of the tendency of the feeling to grow quickly into a permanent condition. Self-consciousness often obtrudes itself. Of two persons engaged in a pursuit, one is entirely occupied with it, and does not bestow a thought on himself as the agent ; but the other has his mode of performance, and how it is regarded, more before his mind than the thing itself. This is incipient vanity. Self-confidence is a preference for one's own opinions, and a trust in one's own powers. It is often a sign of inexperience and ignorance. Self-conceit is an undue estimate of one's own powers and opinions. It is the exhibition of self-esteem in its most offensive form. Its influence is debasing, and it has the effect of throwing obstacles in the way of progress. Self-respect is the most favourable side of the feeling, for in this form it preserves from what is degrading. A proper self-respect is often a preservative from mean, low, and wicked actions.

**IV. Heart.**—Certain feelings—as tenderness, sympathy, attachment, courage, fear—are often included under the term heart. To cultivate the heart is an expression often employed to point out that right feelings towards others are to be sought as the end in enforcing right conduct towards them, and is intended to warn from the mere hollowness of seeming what we should be. The importance of this culture has always been maintained. The training of the head and of the heart is often used as an exhaustive division of education, and, though shortcoming, points out that bringing the feelings so classed into play, and carefully guiding them in action, are important elements in a right discipline.

1. **Tenderness.**—This feeling is the root of some of the best feelings with which others are regarded. The objects qualified to call it forth are so because they suggest ideas of weakness or helplessness, or of delicacy and beauty. It may be called into existence, too, by joy, music, poetry, and even tones of the voice, into which has been thrown some degree of pathos. Its presence is not to be regarded as evidence of a right state of heart, though doubtless the absence of it on occasions which should call it forth must be regarded as evidence of a wrong state. Its office seems to be to fit the mind to receive other impressions, and to introduce emotions which will lead to active exertion. Not unfrequently the recollection of tender feeling, under particular circumstances, proves a safeguard in strong temptation.

It is as introductory to other states of mind that it is often sought to be induced in school. To call forth tears is favourable to producing right impressions ; but too often the teacher is satisfied with that, as if it were the end he sought. This is a danger specially incident to religious instruction. A tear is a good sign ! an effect to be prized ! an end to be gained ! So it is, if the teacher do but remember that a gush of tenderness by no means indicates a change of character or purpose, though it may dispose for it. He should seize the opportunity to awaken some emotion of a more enduring nature.

Sometimes the appearance of a child—beautiful, delicate, graceful, and interesting—will inspire tender regard, but this must not be allowed to influence the teacher's conduct to the prejudice of less favoured children. Acting on this emotion, the weakly in intellect, the weakly in body, and even the deformed, may be made objects of regard to a whole school, everyone feeling an interest in their protection and progress ; for tender feeling often excited by an object tends to produce affection for the object.

2. **Sympathy.**—This is the taking on of another's feelings. It is entering into his state, and realizing his emotions as our own,—the emotions being the same in kind, but not in degree. As the emotions of others are known only through their manifestations, sympathy implies the power to read emotional expression, to copy that expression, and to assume in doing so the feeling itself. This is the entire process. First there is present, in idea or in reality, the

external expression of an emotion, then an assumption of that expression, which is followed by the feeling itself. From this it follows that sympathy can be excited only in two ways ; first, it may be excited by witnessing the expression of another's feelings, or it may be by conceiving from description what are his feelings. In both cases there is an act of imagination, by which we place ourselves in the other's circumstances, as well as a production of the expression by which the emotion is manifested.

The tendency to assume the feelings of others cannot be regarded as an invariable law, but as a disposition to fall in with these states. The tendency is modified by several conditions. Young children often find it impossible to sympathize with older children, because, never having experienced the emotion, their imagination cannot realize the state. Then, again, older children do not often sympathize with the younger, because experience has corrected many of their earlier conceptions, so that circumstances which were wont to excite feelings do so no more, and they rather regard with contempt the feeling exhibited. Here we have two laws relating to this state : one is the necessity of previous experience of the feeling to sympathy ; the other, that when the mind is strongly possessed by any other feeling, it excludes sympathy ; to which may be added, that as most feelings introduce others, in some instances the second feeling comes on so rapidly as effectually to displace or efface everything like sympathy. As an instance of this, a lad who witnesses the punishment of another may have sympathy displaced by fear.

The tendency to sympathy is strong in early life, for then the tender emotions are strong, and those of self weak. In fact, these are so closely allied that tenderness is often mistaken for sympathy. The occasions that stimulate sympathy in school are frequent, its influence is potent, and may be beneficial or injurious. Recognising as a fact its strength in early life, it is yet to be noted that in the young it is in proportion to the strength of attachment. Hence the teacher must win the affections of his children. These secured, sympathy would prove a spur to carry out his wishes, and would sustain the public opinion of the school in his favour when he was compelled

to inflict chastisement ; for in this case the children would sympathize rather with the grief of the teacher than with the pain of the culprit. It is to be observed, too, that those feelings are most sympathetic which are usually attended by strong outward emotion ; thus grief, fear, laughter, excite sympathy. Tears call forth tears, fear is contagious, laughter is provocative of laughter. How far pain excites sympathy is deserving of attention. Pain in itself is a weak stimulus ; it is so soon forgotten. It is true that its accompaniments and accessories are often permanent adhesions, and take strong hold of the imagination, but the feeling itself is often irrecoverable. To yield to pain, too, somewhat excites contempt. These things make it difficult to feel any lively sympathy with mere pain ; but pain is often associated with strong muscular contortion, or with other feelings, and these may call forth their like in the bystander. Thus in school a chastisement may be evidently unjust, or disproportionate to the offence, or be attended by marks of favouritism to others, in which cases there would be experienced a sense of injustice, or of indignation, or of anger, and with these the on-looker may sympathize, though he does not with the pain. The fact ought not to be overlooked, that the consciousness of the sympathy of his fellows in such feelings will enable a lad to bear, and even to feel pleasure in, the inflicted suffering.

**3. Affection.**—The tendency to love, to find objects of attachment, is one of the most striking characteristics of human nature. It is instinctive. “It is not a thing to be planted, the seed is already sown, and all that is needed is to remove whatever on the surface would prevent its growth and development. . . . Break the crust which conceals the hidden fire, and the warmth will flow out.” The object of such an instinct is that we may find our happiness in promoting the enjoyment and identifying ourselves with the interests of others. It is intended to break through that crust of selfishness which the emotions of self have a tendency to raise over every one, and to lead to active exertion on behalf of others. Affection is cherished by occasions for acting it out.

(a) **Influence of Affection.**—Among the means of influence open to a teacher, one of the most effective is through this affection. Where children love they are

*disposed to obey.* In schools where coercion is the only motive to obedience, it often becomes an object to cheat the teacher, to impose upon his credulity, and to shirk the work—every instance of success being something to be proud of. But where the authority of a teacher has its broad foundations in the attachment of his children, such practices are not known; for where we love we are desirous to please, and this desire would lead children to obey. Eye-service disappears before a rule that has inspired its objects with affection and esteem.

Where children love they *give their confidence*. There are some teachers to whom a child can never unburden itself; to whom its difficulties, trials, temptations, and inward fightings are never known; to whom the soul of a child is never disclosed. The teacher, afraid, it may be, of his dignity, has inspired the little one with awe which keeps it from penetrating the inclosure into which the teacher has retired; or perhaps he has shown himself incapable of sympathy with a child, so that the little one shrinks from the exposure through dread of his frown, it may be of his sneer. It is not so where love exists; here the child makes the teacher the depositary of its secrets, of its trials, griefs, hopes, joys, employments.

Thus the teacher gets a *knowledge of a child's character*, and by what means it is most easily influenced; this, it is obvious, is a source of power. A great maxim in education is, "Adapt your measures to the particular nature of the being to be educated." But the difficulty is, to get at the nature of the child, to find out in what particulars one child differs from another, and the causes why a measure which is successful with one has no influence over another. Now this confidence, this repose of soul in the teacher, is the very means of solving the difficulty; here, in the development of character, is the very knowledge sought; here the motives which most powerfully influence the child are laid bare, and the opportunity is given to form plans to strengthen or weaken them as the case may require.

The highest result of affection proceeds from its tendency to put its subject in the course of *self-improvement*, to excite and foster self-activity. One who loves another is anxious to be all that the other approves. So it is with the child that loves its teacher; the result is of

course determined by the teacher's character. If he be a man of high aims he will inspire his children with an enthusiasm for the highest excellence, and may excite a spirit and energy which cannot be quenched. It is true that such a spirit springs at first from a low motive—the desire to be what the teacher wishes,—but eventually excellence for its own sake is the one thing sought, and thus one of the chief ends of education is attained.

"Love is the first and strongest feeling in the child's bosom ; it is essential to his happiness ; it will flow forth from the child, unless it be positively repressed by the imprudent or unkind conduct of his superior ; it will lead the child to self-denial ; and it will make pleasant to him a path which may have no attractions is itself."

**How to acquire Attachment.**—How to acquire the affection of his pupils is a question of vital importance. The teacher must be *worthy of their esteem*. Where respect and esteem do not exist, love cannot. He may be despised, he may be an object of contempt, he may excite pity ; if so, it is impossible that he should excite affection. To obtain respect he must have perfect command of himself—such a command as involves control of his temper, as saves him from rash judgments, and from acting hastily, unjustly, and with partiality. It is not enough to avoid the sudden burst of anger, he must take care to avoid the sour look, the incautious word, the irritating taunt. He must have patience with dulness, and never by word or look expose it to ridicule. Such watchfulness of himself as this implies can proceed only from the conviction that he must respect the feelings of his charge. A genuine respect for the feelings of the young will, by saving the teacher from much that is irritating, go far to secure respect and affection. Few things should be so sacred to teachers as the feelings of a child. Warmth must not be met by coldness, enthusiasm must not be encountered by sneer, tenderness must not be blighted by contempt. If he is not careful in his treatment of their feelings he may excite bitterness and hatred, and thereby erect a barrier to that communion and confidence so essential to his influence and their profit. Consistency is another feature essential to the feelings of respect ; such consistency as implies not only a correspondence betwixt his professions and practice, betwixt his precept and conduct, but that

which consists in uniformity of government. Children are eagle-eyed to detect the slightest discrepancy betwixt what a teacher recommends and what he does, and between his acts at one time and another. Hollowness of character will never do in a teacher ; he must be upright and downright, or his children's respect cannot be obtained. Nor is such respect forthcoming for one who proves himself incapable of managing them. They despise such a one in their very soul ; but they give him their earnest, thorough respect who has the mastery of them, who knows how to string them up to the highest pitch, who knows how and when to strike the right note, who can and does bend to his will, and their good, the restless energies of a hundred minds. Contempt, rather than respect, is the result of that resort of the poor teacher—indulgence. Children despise those who indulge them.

Another means of winning the affection of children is to be *interested in their hobbies and pursuits*. One who wants sympathy with them must fail to enlist their affections. He cannot enter into their feelings, he is not interested in what interests them, he is not therefore the object of their affections. They may respect him, they may be convinced of his friendship for them, but they cannot love him. One who sympathizes with children will not want the disposition to assist and encourage them in things which interest them. Many a boy's heart has been won by assistance judiciously given. The example given by Abbott is not uncommon. A dull boy had given much trouble to his teacher, all of whose efforts were unavailing to interest him in his lessons or to penetrate his mind. One day the teacher asked him to lend him one of his books, on opening which he found some pencil sketches on several of its pages, which were not destitute of merit. On discovering that they were the boy's own, he offered him assistance in what was a favourite pursuit, from which time the boy was no trouble to his teacher. He who sympathizes with children will manifest it by frequently joining in their sports. Nor will there be any danger to his authority from such an unbending ;—all experience shows that its tendency is to enhance it.

*Genuine concern for the well-being of the child* will help to secure its attachment. Such concern will show itself in a spirit of uniform kindness. Children are never deceived

by professions of regard which are unaccompanied by kindly acts. Kindness of tone and manner under all circumstances—in the instruction of dulness, in administering rebuke, in bearing with waywardness—speak volumes to the heart of a child. Nor must this care for its well-being be merely directed to the future : it must be manifested in care for its present happiness. All arrangements should tend to produce the sentiment—“School is a pleasure.” A real, hearty desire that his children shall wear smiling faces and possess happy hearts, will, by its manifestations, impress them more with their teacher’s concern for their good than the strongest assurances can do. Genuine concern for a child’s well-being will lead the teacher to stimulate its higher power, and thus help to win its regard. It is a mistake to suppose that children love those who indulge them, or who pamper them with praise. Few things so convince a child of one’s zeal for its welfare as inciting it to praiseworthy actions, encouraging it to encounter and overcome difficulties, and enlisting it in favour of self-improvement. Such conduct increases its self-respect, and thus leads it to prize him who instrumentally has been its cause. Thus to win regard by convincing of the teacher’s desire for the child’s well-being, will require the teacher to be fertile in expedients to prevent wrong, or in dealing with it. He must seek out the causes of offences, and act in reference to them rather than punish individual cases. At the same time he must by chastisement, when required, convince his children that his concern for their welfare imposes upon him the necessity of inflicting bodily pain when nothing else will do. Nor will corporal punishment, rightly inflicted, estrange his children’s affections ; rather will it bind them more closely to him.

The animating principle of him who would win children’s regard must be love for children. Affection inspires affection. Its influence is proverbial. It has charms for the worst natures. It has subdued the most ferocious dispositions. It has reclaimed the most abandoned. Instances of its power abound on every hand. Some of the highest triumphs of reformatory and ragged schools are due to it. How is such a love to be attained or deepened ? By often thinking of children,—of their wants, their trials, their dangers, their destiny. By think-

ing of the evil influences by which they are surrounded, and of the vast interests that depend on their present training. Let the teacher often think of childhood, its thoughtlessness, joyousness, laughter, frolic, and fun ; let him enter into its sympathies, try thoroughly to understand it, and heartily *work for it*, and he cannot but love it.

4. **Fear.**—This is a word used somewhat ambiguously, so that doubts are often expressed as to its being a legitimate agent in education. Some attribute all manner of evil to it, others contend that its action is beneficial. In these cases it is not clear that the same thing is meant. Fear in one use of the term is a state of painful excitement, which, originating in apprehension of evil, uncertainty, or strangeness, wastes the energies, subdues the spirit, and brings the intellect into abject subjection to its causes. In another use the term designates a state of mind the growth of experience and conviction, the parent of prudence and the offspring of reason, in which certain courses are avoided because they are known to be evil, or to be productive of it. To avoid confusion, the former may be spoken of as fear proper, or fear as emotion, the latter as the principle or sentiment of fear.

(a) **Fear as an Emotion.**—This is a painful state, varying in its character from that of uneasy apprehension to one of intense misery. Often the state of fear is more miserable than that of the evil dreaded, the mind becoming calm and tranquil under actual suffering, the anticipation of which had produced the most abject and miserable condition.

(1) **Its Origin.**—The existence of fear may be traced to pain, apprehension, uncertainty, and strangeness. *Pain* does not invariably produce it ; the temperament of the individual and the circumstances under which it is endured have much to do with it; *e. g.*, a smart stroke—in school—is observed to produce grief in tender natures, anger in irascible ones, and fear in weak ones. The presence of others, too, often influences the result ; the sufferer being nerved by sympathy, buoyed up by vanity, or saved from the imputation of cowardice by shame. Where pain excites fear, it will probably be found to be allied to apprehension of some other evil as likely to arise, or some severer infliction anticipated to follow. The punishment

of a boy in school often sends a thrill of fear through the little community of onlookers. The sudden silence, the deep concern, the startled look, are due to the pain operating through sympathy, and rapidly introducing the associated state of fear. Yet perhaps this result is as often due to the mode of punishment, and to the feeling that rules it; marks of violent anger in the master inducing uncertainty and undefined apprehension, and so exciting fear. *Apprehension of evil* is so frequently the origin of fear, that it is often spoken of as the state itself, and is, in fact, implied in the common use of the word. "Fear," says Sydney Smith, "is the apprehension of future evil." It is rather the result of such apprehension; this being the intellectual precursor of that, the emotional state. Instances occur daily. The upraising of a rod brings former suffering to mind, and, stimulating the imagination, often makes a child quake with agony. The threat of punishment by one who is known to keep his word often has the same effect. *Uncertainty*, allied with probability of evil, and *strangeness* or inexperience in possibly painful circumstances, are states in which anxiety, bashfulness, distrust of our faculties, suspicion, or other phases of fear, have their source. Caprice, joined with severity, it is sometimes observed, makes a state of dread, fear, undefined apprehension, the normal condition of the school where it is found to preside.

(2) *Its Effects.*—The effects of fear are of such a nature as to make its use in education—as an ordinary stimulus—very questionable. *Physically*, it wastes nervous energy, enfeebles the brain, paralyzes the muscles, palls the cheek, greatly weakens the action of the heart, and causes derangement in the secretions. *Intellectually*, it is found to leave a strong and almost indelible impression of the scene and circumstances in the recollection, which in future may be a strong stimulus to the will, and so far might be permitted as a *dernier ressort*, but in itself is a state unfavourable to mental action. It absorbs for the time all the powers of the intellect, "paralyzes perception, and annihilates memory," putting it out of the power of the mind to attend to anything but its own miserable condition. The mind is completely prostrate, the intellect refuses to work; and where fear is a common stimulus, there are found in the character meanness, cunning,

irresolution, duplicity, suspicion, and pusillanimity. Fear is an essentially selfish feeling.

(b) **Fear as a Principle.**—That condition of mind which the certainty of evil following on particular courses induces, so that such courses are regarded with a mental fear or dread, and are avoided as evils in themselves, is the condition referred to by "fear as a principle." A man who fears to sin because he dreads God's displeasure is in this condition of mind. The fear and dread do not indicate a state of pain like the corresponding state in the anticipation of impending evil, but a condition somewhat analogous to it, as influencing the conduct, leading to the avoidance of evil. Here the man fears to sin because of its consequence, the Divine displeasure. So the man who fears to enter on intemperate or vicious courses, because of the known effects of such on health, circumstances, and character, has a condition of mind precisely similar, though the cause is not. So, also, the boy whose recollection of a severe chastisement, joined with the conviction that similar conduct will ensure its repetition, leads him to do his duty, is in the same condition of mind. This condition, produced by the conviction of the certainty of evil or painful consequences following certain actions, is termed by Richter "mental fear," to distinguish it from that which is "bodily fear." It manifests itself in external perturbation. It may be termed the principle to avoid evil because of the consequences of it. The condition of mind now in view is one which would produce the phase of fear proper, supposing the individual to be forced into the dreaded course.

The educational bearings of this principle may now be indicated. As a principle of action, its influence is very decided when it is once brought into existence. It is a state which altogether depends on the certainty of the consequences, on the uniformity of the sequences of the conduct and its results; hence an aim of the teacher both in moral and religious instruction, and in his treatment of offences, should be to produce an indissoluble association in the mind that *sin is misery*. As it is a state originating in self-regard, it is not the highest motive to right conduct. The first object of this fear is pain, but it ought not to continue so, or an effeminate character is the result. To rule a school by the fear of pain is to destroy every particle of

manliness and true courage. Pain, as such, should be despised or conquered. Pain should be coveted rather than wrong committed ; he who does right, regardless of the suffering it may bring, is truly courageous. "The simple way," says Newnham, "in which it can be useful in education is by inspiring fear of doing wrong for its own sake, and not on account of the punishment which may be annexed to it."

**5. Conscience.**—The development of conscience in children, of acting from a sense of duty, should always be the aim of the teacher. Whatever other feelings are appealed to, this should always be supreme. The cases of conduct which the teacher may have to take up publicly should always have their merits determined by an appeal to God's word. The children should feel that the teacher is guided by that word, and often it should be impressed upon them that all their conduct will at last be tried by it.

**V. Habit**—Habit is the tendency to assume or to be what has once been, and is consequently one of the most powerful agencies in education. Habits are the results of educational processes acting with this tendency, and include all those actions or states which, from being practised frequently, have become so much a part of the individual as to be often performed unconsciously ; or, if omitted, would give pain. Habits are slow of growth ; hence sudden changes are suspicious. Bad habits must be displaced by opposite habits ; warning and precept are powerless to effect the change of themselves.

#### Section IV.—Discipline in its Means and Aids.

**I. Means of Discipline.—1. Authority.**—The discipline of a school must be founded in the right to enforce obedience. This right is invested in the teacher by the very fact of parents entrusting him with the education of their children. It must then be made clear to them that he possesses this right, and that when needs be he will exercise it,—that he will not and cannot allow his authority to be disputed. Much will depend on his mode of administration, as to the respect yielded to this claim. A wise teacher, in order to enhance it, will often speak of his responsibility to others ; will use means to enlist the public opinion of the school in his favour ; and

will take care that the character of his government shall deserve the respect of his children.

Obedience must be claimed on the ground that it is right to yield it ; but it will go a great way to secure it if the children feel that what is required from them is just and reasonable. Authority is perilled when a command is given which violates a child's sense of what is fitting or just. Not that the child is to be the judge of what the teacher ought to require from it ; yet a judicious teacher will always have respect to his power to enforce a child's obedience, and will avoid anything that might bring him into a contest, unless in a very plain case. The giving of orders is a point of great importance. The arrangements and regulations should be such that few orders should be needed. No order or signal should be repeated. It will help to secure subordination if the teacher has times of review, when the reasons of the school regulations are clearly explained, and the evils of not observing them shown.

There is a view of authority as a living, active principle, deserving the teacher's serious attention. " It is a power in the individual himself, independent of all circumstances. It is a power difficult to describe, but which sends out its streams of influence along the teacher's pathway. It enlightens, it warms, it vivifies, as it continually radiates from him while he silently occupies his position in a schoolroom. It shows every pupil his place, and keeps him quietly in it. It is identified with the man. It is cheerfully conceded to him ; and yet it goes out from him. It goes wherever he goes, and every pupil is brought under its influence. It exists in the man, demanding, and securing, and retaining cheerful obedience, and becoming the central point of all he does in the way of government."

**2. Co-operation and Public Opinion.**—Second to authority, and necessary to secure the objects of discipline, is the willing co-operation of the children. This may be obtained by the use of the following means :—First, the teacher must endeavour to interest them in the well-being of the school, and show them how much this depends upon themselves. He ought to strive to create a public opinion in the school in favour of whatever is of good report. He should endeavour to interest them in his plans by placing at fitting seasons his objects and aims clearly before them,

by bringing the defects of the school to light, and his proposals to remedy them, and by allowing within limits the scholars themselves to suggest for his consideration whatever they think might be for the good of the school. The co-operation of many may be obtained by investing the leading boys with little offices of trust. Empowering them, not to make laws,—that is his prerogative,—but to carry them out. Lastly, the teacher must win their confidence and be worthy of their respect, by his impartiality, respect for their feelings, avoiding a querulous tone, and by placing implicit trust in them. To create a good public opinion for a high educational standing should be an object ever before the teacher. It will foster it if points of excellence in other schools are brought into view, together with the good points in their own, and the points in which it falls short of others.

**3. Sympathy of Numbers.**—There is a strong influence exercised by children over each other, especially when they are about the same age and standing, and are engaged in the same pursuit. Every child in school is influenced by the opinions and example of those around him. There is a tendency for this feeling to take one direction, to give the entire mass of mind one impulse ; and whenever such a power is developed, it is stronger than that of the teacher himself. This power—sympathy of numbers—is one for evil as well as good ; it may frustrate a teacher's plans and neutralize all his efforts, or it may become one of the most powerful engines of government. This depends on the teacher himself ; depends on the skill with which he can bind the children to himself, on the tact he has of interesting them in things which admit of simultaneous feeling and action, and on his power to imbue them with one spirit. In wielding this powerful engine the most poignant pain may be inflicted, or the highest pleasure communicated. Care should be taken that offences, and not offenders, are the objects against which it is turned.

**4. Marks, Removals, Place-taking, Prizes, and Praise.**—The ordinary modes of exciting emulation are by these means. *Periodical examinations*, at not distant intervals, with removals to a higher class of the proficient, and a system of registration of marks and of progress, are healthy stimuli. *Place-taking* has a value when confined

to subjects requiring merely mechanical effort. Its tendency then is to stimulate the weak or indolent. It also fairly registers the attainments in such subjects. But in subjects requiring a higher culture, its tendency is to reward mere smartness at the expense of real ability. It often confers a premium on forward pertness, and punishes retiring modesty. It sometimes advances to the highest positions such as are ready to answer, however shallow their intellect, and degrades those of a higher cast of mind, who, weighing before replying, are seemingly inferior. It thus defeats an important purpose of education, which is to cherish habits of thought, and discourage mere superficiality. *Prizes* may be expedient when higher motives are not available to influence a pupil's conduct. A great objection to them is, that from inability to measure moral conduct, they are given solely for intellectual acquisitions, which must have the effect of attaching to these an undue importance in the pupil's mind. They are best employed when their object is to stimulate pupils to supply defects, or to gain the mastery of bad habits. *Praise* rightly bestowed is an engine of great power. It depends, as has been shown, for its effects on the character of the person that bestows it, and also on the occasions which call it forth. It should not be withheld when deserved, though the mode of conveying it must depend on the character of the child. An undue use of it must be avoided, or it will lose its power, or it will develop the pernicious sentiment, that conduct in any given instance must depend on the notice likely to be taken of it. Still it must be given on proper occasions; and it must not stand, because sparingly used, in unfavourable contrast with censure and fault-finding, but, on the contrary, the spirit of the teacher should lead him to seek for things to commend rather than for things to blame. It should never be given where the simple consciousness of having done right should be the sole reward.

5. **Shame, Censure, Rebuke.**—The sense of shame should not be rudely awakened. Exposure should be avoided as much as possible. The more delicately it is touched, the more effectual is its influence. Whenever dissatisfaction is expressed or remonstrance employed, whenever reproof, rebuke, or censure is needed, the object must be to develop such a sense of shame as will lead to

the desire for a better state, and to strenuous efforts to attain it. But their effect in producing this result will altogether depend on how they are employed. Unnecessary and rude exposure may harrow the feelings, yet defeat its object by hardening the offender. The frequent employment of rebuke or censure will make the normal condition of the school one of irritation, fretfulness, and opposition. Many words will weaken the effect. When necessary to administer it before the class or school, care must be taken of the spirit in which it is done.

**6. Punishment.**—Cases are continually occurring in which punishment of some kind is necessary, in which there must be a deprivation of some pleasure, or the infliction of some pain. There could be no government, no law enforced, if there were no punishments for offences. Hence fear, the feeling to which punishment appeals, is, as has been shown, a legitimate source of influence in the government of children. But as the final cause of fear is to preserve from whatever is injurious, the aim of the teacher must be not to make punishment its object, but that which renders punishment necessary.

In awarding punishment of any kind, its design must be held in view,—of associating pain with wrong-doing, of seeking the child's good, not the gratification of the master's resentment, and of awakening cordial concern for the fault. Its efficiency to counteract evil must ever be regarded, and care exercised to adapt it to the offence, both in kind and degree. But other things beside the gravity of the offence must be considered in awarding punishment. The disposition of the child must be regarded, for what would be a severe punishment in one case would often prove ineffectual in another. A word, a slight reproof in the hearing of his fellows, would cut many a child to the quick, when a hurricane of reproaches would pass by another, the culprit the while sheltering himself in indifference or scorn. It is necessary to the ends of discipline that the child is really in fault. This is not the case where the task assigned has been beyond his ability to perform, or where the authority of the parent seemed to come into collision with that of the master. The degree in which he is in fault ought to be ascertained. It may be that a child has been instigated to do wrong by another, in which case the latter deserves the severer

penalty. All such circumstances require to be considered, that punishment may answer its design.

Of the kinds of punishment adopted in schools we have—Rebuke, which, where attachment exists, is often a severe punishment, the degree of severity depending on its being private, before the class, or in presence of the school. Tasks to be learnt, than which nothing more unfortunate was ever conceived ; that with which should be associated feelings of pleasure, being made an instrument of pain. Confinement after school hours, which is objectionable because shared by the teacher. Intercourse forbidden with other children, which under some circumstances may be of considerable effect. Corporal punishment, which, as a usual resort, is an expedient of the poorest teachers ; but cases occasionally occur, even in the best schools, when it is a question whether it ought not to be employed. As a teacher's claim to employ it at all is based on the delegation to him of the parents' rights and duties, implied in placing their children under his charge, it becomes his duty to employ it in all cases in which it would be theirs. Nevertheless it should be used cautiously. There is a strong temptation, in its being always at hand and immediately effective, to neglect the higher motives to which it is his privilege to appeal. Besides, it is hardening in its influence, not unfrequently in the case of the children—almost invariably in his own. The difficulty, when a child's mind is occupied by pain of body, of turning its attention to the offence, must not be overlooked. And the teacher should make it his rule never to inflict it at the moment of the offence.

**II. Aids to Discipline. 1. Organization.** — The prevention of evil is better than its cure. Much may be done to promote the ends of discipline by measures which make fewer the temptations or occasions to do wrong. Whatever measure of restraint a child is compelled to put on himself, weakens the desire to do wrong, and also tends to form in him the habit of doing what is required. Hence the advantage of superintendence and of good organization. Good organization promotes the objects of discipline, by placing every child in a suitable class, by assigning to each class a definite work, by keeping every one fully employed, by providing for change of place and subject at suitable intervals, by regularity in the following of lessons,

and by bringing every class daily under the personal instruction of the master. These things promote order, furnish motives to diligence, remove the temptations to do wrong arising from not being fully or suitably employed, or from lessons being so long as to induce weariness and restlessness, and by making each child acquainted with his place and work.

2. **Drill.**—The various drill movements and mechanical devices for arresting attention, preserving order, and relieving weariness, are very important aids to discipline. They accustom children to act in a body, thus bringing into play sympathy and imitation ; they train them to prompt obedience at the word of command, thus helping to form the habit of obeying ; they promote cheerfulness and good humour ; and they destroy the sense of fatigue which arises from continual application.

3. **Code of Laws.**—The laws by which the school is governed, by being clearly explained—as recommended in a previous paragraph—may be made to help in the government of a school. In drawing up a code of laws, those which are moral, and come to us with Divine sanction, must not be written in it. They already exist, and are acknowledged by the conscience of every child. No law, for instance, should be made against fighting. This is already condemned by the Divine Law, and the child understands, or may be made to do so, that the breach of it will expose him to punishment. The laws proper to a school code are merely conventional regulations ; they come with the sanction of the master and of the managers of the school. They should be few, simple, dictated by common sense, and not unnecessarily interfere with that liberty which the moral development of the child may require. By making it appear in his punishments that it is *law*, and not personal feeling, which dictates the infliction, and by placing himself continually under its obligations, the master will do much to secure that respect for law which it is one of the aims of discipline to attain.

## BOOK III.

# SCHOOL METHOD.

### PART I.—THE ART OF TEACHING.

#### CHAPTER I.

##### NATURE AND PROVINCE OF SCHOOL METHOD.

1. **Its Nature in General.**—“Method is the following of one thing through another.” It is the way or path by which we proceed to the attainment of some end. But it has come to have a wider meaning. As used in logic, science, and philosophy, it covers the whole field of human research and knowledge. It includes all that has to be done for the discovery of truth, for its establishment, and for its communication to others. It has also to set forth the relations subsisting between the various branches of knowledge, that it may show the order in which they may be most effectively studied.

2. **Its Province in School.**—In school education the province of method, as compared with the whole field, is very humble; yet not on that account of little moment, for it is the science of intellectual culture in all its early stages. As such it embodies the principles and prescribes the means by which that culture has to proceed. It does this for a single lesson; for an entire subject of instruction, as geography; and for the whole discipline of the intellect during school life. The spirit of a method—itself a spirit rather than a form—is determined by the end proposed.

The ends in school instruction are, the acquisition of reading, writing, and arithmetic ; the communication of a certain amount of knowledge ; and that kind of discipline which will give the ways, the ability, and the desire of intellectual pursuits. According as one or other of these is prominent, will be the method of the teacher. But he who makes the last his great aim, using the others as his means, will obtain better results, and more quickly, than if the former are held exclusively in view. For everything done for the pupil, and by him, from his first entrance into school, being part of a comprehensive scheme embracing the whole school life, will give a spirit and a life which could not be otherwise supplied. Under conditions like these, there would be greater activity of mind on the part of the teacher, a casting about for expedients, a wiser adaptation of means to ends, an interest in watching the development of the pupils and the influence of the plans in operation, and an earnestness of effort in enlisting the activity of the pupil, which, besides relieving the work of its tedium and drudgery, would go far to ensure its success. Such an end, distinctly conceived in relation to all the means by which it is to be sought, and held perpetually in view, would appropriate to itself all that the teacher knew or could learn of mind and its laws, and all he could acquire of real knowledge ; and it would require him to consider each subject of instruction in relation to the mental faculties it calls into play, so as to determine the order in which its parts should come, as well as the mode in which they should be presented ; and also its correlation with other subjects, so as to determine when it should be introduced.

## CHAPTER II.

### OF TEACHING.

The Art of Teaching is the art of communicating, and of training to think ; hence it includes all the devices employed in instructing, and in gaining the pupil's co-operation during the process of instruction. Instruction is the art of communicating, of making clear, and of building in the mind ; training to think is taking the mind

through such processes of thought and action as enable it to grasp principles, form conclusions, and discover truth for itself. Instruction furnishes the mind with material, training furnishes it with power ; the one process makes it bright, the other makes it keen. The art of teaching cannot be communicated, though it may be acquired. There is always an unconscious skill in the practice, which is not communicable by rule. The principles on which the art depends are in the mind, guiding the thoughts, stimulating the invention, and balancing the judgment ; but there is also present a spirit, a skill working through the whole. The science of teaching may be learnt thoroughly ; the art must be a work of time, and must depend on the spirit in which it is engaged in.

**I. Unity.**—A lesson must have unity. It must be complete. It is not to contain all that belongs to the subject, but by a rule of selection, grouping and adaptation, everything necessary to oneness of design and effect, or as Carlyle says, “ the union of like to like, which is method.” This principle underlies all teaching. To carry it out successfully the following rules must be observed :—

**1. Aim, Purpose, Design.**—First fix upon an end. Define exactly what you aim to accomplish. “ Purpose is the one thing on which success depends. To have a distinct intention, and to pursue that unflinchingly, is the only means of securing effectiveness. An aim signifies an effect foreseen, desired, and spontaneously determined upon, which we are desirous of producing.” “ Aimlessness and random shot are never capable of producing calculable results. To have a clear and distinct conception of the end or purpose to be wrought out, is an essential requisite in the construction of a proper and advantageous method.” There must be, if an effect is to be produced, an end held distinctly in view, and a determination of everything to it ; and even where the aim is simply the communication of facts, some principle should be adopted which will bind the several parts, and secure a readier reception of them by the mind. Unity, however, consists not in a well-organized arrangement of parts, but in effecting a purpose. There may be real unity where the form of it is not prominent, and it may be wanting where the form is present. The first thing, then, to be done, whether

in a single lesson, in instruction in a given subject, or in the education of an individual, is to lay down distinctly what it is proposed to accomplish. Unless this is done, the plans must be vague and indistinctly conceived, and the results marked by perplexity, obscurity, and looseness.

**2. First Notion.**—The subject should be placed clearly before the class. This should be done so as not to suggest too much, but should give the children a definite notion of that on which they have to be employed. This rule excludes introductions which do not introduce. It prohibits beating about the bush. It saves time, secures attention, and may excite interest. How it is to be done will depend on the topic. Sometimes it may be put as a problem to be solved, at other times as a question, the answer to which has to be found, or at other times as a proposition which has to be illustrated and proved.

**3. Progression.**—Unity implies progression. It implies a starting-point, and the cutting a road from it. It implies that the first idea, however vague and indistinct, is the first step of a series that will lead to a clear and definite result. It puts the learner on a road, every step of which is a gain, and tends to unfold a subject, bring out a principle, or produce an effect. That this may be so, the end must be held distinctly in view, the eye must be fixed upon it, until, however tiny in the distance, it at length occupies the whole field of vision. If there is to be unity in the work of the teacher, the connection of its parts must not be at random. In every lesson, and in the whole culture of the pupil, there must be a rule of selection and of adaptation. A lesson, as well as the pupil's general progress, should be a growth in the mind, each part rising naturally out of the preceding, and forming itself into the mind. Each subject has a path of its own—that is, the parts have a certain recognised order,—and that path must be pursued.

**4. Variety.**—Unity does not exclude variety, though it prohibits rambling, and lays a check on irrelevancy. True teaching requires the bringing together things seemingly the most remote, and their handling so as to help the general result. This, skilfully done, issues in those pleasant surprises produced by finding identity or relation where it was not expected, which are amongst the most powerful stimulants to intellectual exertion.

5. **Advantages.**—The teacher who has a fixed aim, which he steadfastly pursues, cultivates in himself and class concentration of mind. The very act of placing his subject distinctly in view gives him a firmer hold of it. The practice of drawing on all sources, and of making everything that turns up help on his purpose, improves his power to discern relations and to strike out analogies. He has also in his purpose a light to search out fitting matter, and a test to try its fitness. It puts everything into its right place, and thus tends to orderliness of mind and to logical thinking. It tends to foster good intellectual habits in the pupil.

II. **Nature.**—“Follow nature” is a good maxim for the teacher. Watch how a child learns during its first years where there are no attempts at formal instruction. Note too the natural methods by which children at a later time learn when left to themselves. Mark those implicit and often unconscious processes by which they become acquainted, not only with natural phenomena, but natural laws. Extend the observation to later life. It will be found that following nature gives birth successively to the three great processes of intuition, induction, and deduction,—the mode varying as the intelligence, mental power, and purpose in view vary. Following nature we shall act in our teaching on the following principles:—

1. **Starting Point**,—from the Known to the Unknown.—The irksomeness felt in the early stages of some subjects is due to their having no starting-point in the mind, and to the greater difficulty thence arising to acquire and retain them. When that which is entirely new is first presented to the mind, there is required a greater amount of repetition to fix it in the memory, and this adds to the irksomeness of first lessons. Hence, to secure activity of mind, readiness of reception, and permanence of impression, the first thing in teaching is to find out what the pupil knows that is most nearly allied to what is to be presented, in order that this may be made the means of introducing and explaining the new matter. By taking hold of something already in the pupil’s mind, and dealing with that so as to evolve out of it, or place about it, what is to be given, is the best way to excite the interest of the learner, to stimulate his activity, and to secure ready reception for the new material.

Making this principle to furnish his rule, the teacher will have no mechanical routine to which everything must bend, nor stereotyped forms on which to mould his lessons. As the attainments of his pupils vary, as their tastes differ, and as their natural abilities are not the same, no fixed plan can suit all cases. But on the other hand, the skill of a teacher is exhibited in the tact with which he makes himself acquainted with the pupils' states, and in adapting himself to the condition of each, so as to secure to him the highest culture of which he is capable. A teacher's acquaintance with his subject, with the methods proper to its treatment, and with the minds of his pupils, should be such as to enable him to start at any point and yet turn them into the track he had marked out for himself.

This principle is applicable to each subject taught in schools. (a) The exposition of a reading lesson, where the order of the lesson is fixed by the text, will best succeed when that which the pupil knows is the starting-point of the exposition. (b) Subjects like arithmetic and grammar of course imply it, for there can be no advancement, nor even comprehension, so long as the knowledge which the pupil has is not the starting-point of the next lesson. (c) In geography and history the same thing is true. The distant in place or time can be conceived only by means of the near and familiar. (d) And it holds good in relation to abstract truth, like that furnished for our guidance in religious and moral duty. It is utterly impossible that the truth shall enter the mind of a child at all, unless it is presented through examples falling within the range of his experience.

**2. Things before Words; Ideas, then Language; Concrete to Abstract.**—These expressions point to one general principle, that of becoming acquainted with the real before proceeding to the symbol. They express the great truth that real knowledge, of many things, is only to be obtained by first dealing with the things themselves. They also teach us that a knowledge of things is more valuable than that of words, and that a knowledge of these is best obtained through a knowledge of things. Words are not knowledge, they only form the dress in which thought clothes itself, or the channel through which it is conveyed. By employing the senses of the learner on things, we make him an active agent in his own

instruction. We accustom him to examine, compare, and reflect. Language thus becomes to him a living thing, instead of a dead weight on his faculties. No teacher who cares to succeed, will be hasty to give words. Words often arrest progress, they become substitutes for intelligence, and the learners seem to know when they are ignorant. Yet it is important to increase the vocabulary of children ; but it is equally so to give their language vital force. No better, no surer plan can be used than first giving ideas, and then the power to express them. Words thus becomes significant, and they learn to use them rightly ; especially so, if they are trained always to express themselves in full sentences. In this case there is a reflex force. Accuracy in thought is associated with accuracy of speech ; but the habit of accuracy in speech tends to strengthen that of accurate thinking.

The principle of proceeding from the concrete to the abstract has an important application in all the early stages of arithmetic, and in many of the later ones. The notion of number is best given by grouping things, and clear conceptions of the operations by dealing with things. These should always precede the use of figures, and will be found the only means of giving abstract notions. The principle under notice also suggests the course to be taken when at any stage there is a difficulty in apprehending a thing. Acting on it, whenever the conception requires the use of the senses, or will be made clearer by appealing to them, such course should be pursued, that the more formal or abstract teaching may be understood. As examples, whenever words cannot be explained by mere verbal description, the ideas should be given by bringing the objects themselves, or by means of pictorial representation, or by diagrams ; so, in operations in number, many processes will be made perfectly intelligible by a proper use of objects or diagrams, which, without their aid, would be but so many rules to be applied mechanically.

3. **Facts to Law.**—There are several forms in which this principle is expressed. They differ only as affected by the subject of investigation. Thus we have the particular to the general, example to principle, process to rule. These expressions give us the natural mode by which children, by an unconscious induction, obtain their first knowledge ; and this suggests that the same process should

be followed in their formal instruction. The principle is but an extension of that dealt with in the previous section. It requires that the knowledge of natural phenomena and laws shall be obtained by observation, experiment, and induction ; and in other things from experience and the collection of instances. In the former case it lays down the law, "Question nature, compel it to give up its facts, and be not too hasty to interpret them ;" in other cases it says : "Gather your instances, make sure of your facts, make clear the processes before you assume principles, or lay down rules." Acting on this principle, the teacher will guard his pupils from the tendency to hasty induction—from jumping to conclusions—by bringing forward instances they did not know, or had overlooked. He will also see that a slow, cautious procedure in the early stages of any subject is ultimately the most rapid, because it is sure. He will not either overlook the fact that the value of this principle in teaching is not merely that it ensures the possession of knowledge, but mainly in the habit of mind which it is its tendency to form.

**III. Difficulty.**—Your teaching will anticipate the learner's difficulties, and make due provision for them. This it will do, not by clearing them away, but by such treatment as will enable the pupil to master them ; for it is in discovering difficulties and in overcoming them that mental power is obtained.

**1. Simple to the Complex.**—It must be remembered that the pupil's power of attention is weak, and his gift of discerning relations yet weaker. That which is complex implies lengthened attention in holding the parts in the mind until the whole is mastered. To break up and bring down what is complex, so as to present it in small portions, is the duty of the teacher. It will often be found that what is simple, if new, will be a sufficient tax on a child's attention, and certainly the teacher must present what is complex, either in matter or form, by degrees, giving the simplest first, if he would secure its reception. In some subjects—as grammar—the complex should not be presented until the less so is familiar. It must be remembered, too, that as the child's power of discernment is small, what is easy to the teacher may be very difficult to him. Hence the teacher should carefully accommodate his pace to the pupil's, and should lead him along the steps of

a subject consecutively, and not by great strides over several intermediate ones at once.

2. **First Clear, then Familiar.**—It follows from what has been said, that each part of a lesson, each step of a process, should not only be understood, but should be made familiar. It then becomes easy, and a starting-point for a higher venture. Nor let it be thought a loss of time to go over and over the same point under a variety of aspects and of illustration ; for, in fact, this is the only way by which a thing can become the property of the intelligence rather than of the memory. Hence a teacher must not attempt too much in one lesson. He cannot proceed faster than his pupils can follow, and he will find that a small area offers a better field for thorough culture than a large one. "No lesson," says Stow, "is given till it is received."

**IV. Analytic and Synthetic Methods.**—Methods of teaching are based on the principles here set forth. Strictly speaking, there are only two methods of teaching a given subject—analysis and synthesis. We must proceed from the whole to the parts, or from the parts to the whole ; from facts to principles, or from principles to facts ; from the general to the particular, or from the particular to the general. Analysis is generally the method of knowledge, synthesis of skill. Where the end is mechanical skill, as in speech, writing, drawing, and music, the method is that of synthesis ; the knowledge which makes this possible is by analysis. In teaching there must be a constant intermingling of the methods, according to the wants of the pupils.

1. **Analysis.**—Analysis is decomposing what is compound, that we may know the parts and the relations among them. It is either real or mental. Real analysis is the actual separation of a compound into its elements ; mental analysis is the distinct enumeration in thought of the parts of a complex subject. *Analysis is a method of investigation*, and its path and end one of discovery. Hence there is often uncertainty in the result, though no analysis should be conducted but in the light of some guiding principle, which gives somewhat of an obscure clue to what is sought. But by a teacher with his pupils there is of course uncertainty solely to the latter, for the former is acquainted with all the steps of the process, and knows certainly where the investigation will lead. Yet

it must retain all its character as one of investigation to the pupil, if he is to obtain the same kind of benefit therefrom which it supplies to those who employ it for their own advancement in the knowledge of truth. Skill in analysis consists in keeping the pupil's attention concentrated, in giving him the leading principle by which his mind is urged and guided, and in striking out from him suggestions or trial hypotheses, by which to connect the facts or to discover the relations. Analysis as a method of subdivision is to be employed when a subject is too difficult for the pupil's grasp. For by breaking it up into parts, that which was too difficult as a whole is brought within his apprehension. *Analysis is the natural method of acquiring knowledge.* To it belongs primarily all the knowledge of early life. It is the first step which the mind takes, though its clearer and later conceptions result from the synthesis that succeeds. As a natural method it is interesting to children, beginning, as it does, with the familiar, having in store pleasurable surprises, and opening out opportunities of invention and discovery.

2. **Synthesis.**—This is the method of reproduction, where the purpose is skill. It is the complement of analysis. It recombines from the simplest elements, that a clearer conception of the whole may be obtained, and that it may be better retained. For the latter purpose it marshals the whole of the ideas obtained, distributes them to their proper classes, and binds them up in their real or natural relations. It is the method of reproduction; *e.g.*, speech, writing, drawing, and other things requiring skill, can be acquired only by synthesis. The pupil starts from the simplest parts, gradually enlarging his operations as he acquires skill. *A difficulty in the use of this method in school arises from irregularity of attendance.* As it implies that the pupil shall take each step in its order, an omission of one or more not only prevents his own intelligent progress, but embarrasses the work of the whole class. Hence, in those subjects demanding the method, the instruction is generally individual, each being cared for independently of the class to which he belongs.

### CHAPTER III.

#### CONDITIONS OF SUCCESS.

I. **Co-operation.**—Activity of mind is an essential condition to a child under tuition. It can be obtained only by securing the willing co-operation of the pupil.

1. **Attention.**—This is the first thing. It must not be confounded with quiet or listening. Attention is an attitude of the mind in which it is absorbed in the contemplation of the subject before it. It is often instinctive. The mind is arrested by an object without previous intention on its own part. Such is the source of all infantile knowledge, though such attention is often found in later life. At first instinctive, it at length comes to be voluntary—but not at a bound ; attention is a growth. An intermediate stage of this power is the degree of application given to a subject for which there is a strong liking—the subject acting on the mind with the same kind of attractive force as in the instinctive state. But the attention which the teacher aims to secure is that concentration of the mind on the subject before it, when there is no attraction in the subject but the reverse. Attention is not a passive state, it is a very active one. Listless inactivity of mind is to be avoided. The pupils must be trained to exercise their minds intensely on whatever comes before them.

The art of teaching consists in great measure in fixing the pupils' attention on any topic, and in securing its transfer from thing to thing without dissipation of thought in so doing. Of its importance to success there can be no question, for only as it is thorough can ideas be free from obscurity, or the mind work vigorously therewith. That attention may be gained, the matter of teaching must be suitable, and must be presented by proper methods ; the teacher must be interested, as indifference communicates itself ; as the pupil must co-operate, he must not be impelled by fear ; and the exercise must be within reasonable limits, as the brain cannot sustain lengthened exertion on the same topic. Inattention needs to be dealt with discriminately. It may proceed from bad air, confined position, or lengthened work. Timid minds are thrown off their balance by direct appeal ; slow ones

require stimulating, and to be dealt with patiently ; weak ones must be handled gently, and the quick must be often challenged.

2. Interest.—A desire to master the subject should be excited. If this is done the degree of attention will be in proportion. If such desire exists there will be strong interest felt, and therefore a powerful stimulus to active exertion will be created. Such interest is not to be sought by keeping back whatever is dry, or by making the work easy. Dry work has to be done, and whenever necessary the pupil must do it. Nor will it want interest to him if his teacher is skilful in the application of motives. The ingredient of difficulty is an incentive to exertion. That which is easy work is dull work. It excites not interest, but scorn. Tell a pupil that a thing is difficult, that it is doubtful whether he can master it, and he braces himself up for the task, he is eager to show his power, and to prove that he is not to be daunted by hard work. But the teacher must give him credit for his exertions.

II. The Teacher. 1. His Spirit.—One of the most important elements of success in teaching is the spirit in which it is engaged in. The teacher should not merely bring a liking to his work, he should engage in it with the highest interest, he should throw into it the whole force of his character, and he should have strong faith in its success. Bad methods even succeed in the hands of such a teacher, where good ones would fail in the hands of one indifferent to his work. Nor need we seek far for the reason : children catch by sympathy the spirit of the teacher, and when he labours earnestly to teach they labour with like earnestness to learn ; or should he be listless and indifferent they become listless and indifferent too. It is deserving of notice how the right spirit deals with difficulties ; it does not succumb to them ; repeated failures do not daunt it ; its motto is "success," and when one plan fails another is tried, and another, till the end is gained. Other things belonging to the teacher, essential to success, are good temper, cheerfulness, and patience with the wayward and the dull ; self-possession and readiness of resources ; physical and mental vivacity ; and a decisive, authoritative, and becoming manner.

2. His Insight.—Success depends on the distinctness with which his objects are present to the teacher's mind.

This is true in all pursuits; *e.g.*, a builder must have a clear conception of what he has to do, or he will not see his way to accomplish it: so with the teacher; he ought clearly to set forth to his mind what he means precisely to accomplish in every part of his work, and he must see the exact relation between all he does and the object he has in view. But not only is a distinct aim necessary, but also a clear conception of the principles by which he must be guided. There are two classes of workers—those who do everything by rule and rote, and those who know what they do, and understand why they do it. Now this must affect the results. One who acts by rule only is not in a position to deal with difficulties never contemplated by his rule. Take an example. Two children, one quick, the other slow, are learning to read; here the same rule would not do in both cases. Take another example. A man engaged on some work wants a certain article, and not having it cannot proceed; another, with a truer perception of his end and a better knowledge of his work, finds a substitute. Again, one who acts by rule is not in a position to take advantage of circumstances such as those supplied by the answers or questions of children. Here, then, we have the relation between principles and methods. A principle shows us what to do, and points out or expresses the laws on which we must act if we would achieve the result. A method is simply a plan or device for carrying the principle into effect. He whose mind is imbued with principles can, by their aid, adapt himself to ever-varying circumstances; but one with a method suited only to a particular case must be lost when placed in unexpected circumstances.

**3: His Preparation.**—The knowledge a teacher possesses of school subjects is not sufficient to enable him always to teach well. Preparation of lessons is essential to success. The opinion that all that is required to teach any subject is a general acquaintance with it, though not so prevalent as formerly, yet exists, and to an extent that is fatal to the success of many would-be teachers. The mistake into which these parties run is that a knowledge of the instruments of education is sufficient to give skill in their use. The two things do not always co-exist, and the latter is of very difficult attainment; it is a thing of growth, and often only possessed as the result of large

experience and lengthened practice. This difficulty has sometimes given rise to an opposite opinion—that the possession of it is a gift—an endowment of nature enjoyed only by a few. But facts contradict this. All who will put forth sufficient energy, study the laws of mind, and make the requisite preparation for each lesson they have to give, will obtain more or less of teaching power. The following remarks of Mr. Fletcher are very much to the point on this topic:—“The intellectual faculties can never be exercised thoroughly but by men of sound logical training perfect in the art of teaching; hence there exist so few highly gifted teachers. In fact, there are none but men of some genius who are said to have a peculiar *tact* which it is impossible to imitate; but I am anxious to see every part of the fine art of instruction redeemed from hopeless concealment under such a word, and made the subject of rational study and improved training.”

(a) **Adequate Knowledge.**—The most gifted and the most experienced find advantage in preparation. Adequate knowledge of the subject is necessary to good teaching. Superficial knowledge shows itself in ill-selected matter, in obscure or partial statements, or in statements wanting in point, and in dealing with answers which suggest topics or raise questions that only the well-informed can treat, or even see the bearing of. Previously to giving a lesson, therefore, the teacher should be satisfied that his knowledge of the subject is such as will enable him to teach it well.

(b) **Preparation of Method.**—Preparation is necessary in reference to the manner of giving the lesson. It is not sufficient to know a subject well; it must be diligently thought over in relation to its apprehension by children, and by the class for which it may be intended. Hence the teacher should consider how each topic is to be introduced, simplified, and developed; how each point may be introduced so as to fix attention, stimulate curiosity, and secure activity; what arrangement is most likely to be conducive to clear apprehension; and how children may best work out their own ideas from those communicated. Besides anticipating his own difficulties in introducing and setting forth his subject, he should prepare to meet the difficulties which his pupils will encounter; the doing which well will depend on his knowledge of children generally, and of his class specially.

(c) **Teaching with Interest.**—Preparation is necessary to teach with interest. It freshens the mind ; and when the teacher has taken pains to prepare, it is more likely that he will take pains to teach. It is a mistake which some persons make, to suppose that we can teach a subject better which we are learning than one of which we are masters. These persons confound the interest which they have in teaching such subject with the success of their efforts. That they feel greater interest may be readily supposed, and that they may even be better prepared to meet some of the minor difficulties of the learners, from having recently encountered them ; but unless their knowledge is complete, it is impossible for them to meet all the difficulties of minds grappling with a strange subject, and therefore impossible to teach it with entire success. Hence a *thorough acquaintance* with his subject is the first requisite of a teacher ; for unless he has viewed it in all its aspects, and examined it in all its bearings and relations, he cannot be considered as sufficiently prepared to teach it. But there is another view to be taken of this matter. However well read one may be in a subject, it will be destitute of that freshness and interest which impart vivacity to the teacher's matter and illustrations, unless there exist some means of readily going over the ground that has been once trodden.

## CHAPTER IV.

### KINDS OF TEACHING.

I. **According to the Purpose.**—As the skill of teachers varies, and as the purpose is not always the same the term has been made to include more or less accordingly ; thus several kinds of teaching have been distinguished.

1. **Rote and Memoritor.**—These two forms are closely linked.

(a) **Rote Teaching.** — This aims at establishing mechanical or automatic results. It makes little demand on intelligence, and largely employs repetition. A common mode of teaching multiplication may be taken as an

instance: the tables are repeated till they come when wanted; in applying them, as in  $573 \times 7$ , the pupil is taught to say, "7 times 3 are 21: set down 1 and carry 2;" and so on. In this process all that is required from the learner is that he shall know the product of two numbers, which of the figures to write down, and which to carry. Now the art of teaching so employed would embrace simply the means by which the pupil's application to his task is secured, and those by which he is made to remember what he has learnt.

(b) **Memoritor Teaching.**—This is that which addresses itself to the memory, without calling in the aid of the understanding. It is often employed in subjects like geography, history, and grammar. When so employed it indicates the absence of skill. It is not denied that in the absence of something better it has a sort of value. It gives employment to the verbal memory, and it demands some effort from the pupil. In some cases it may be a necessary preparation for a higher process. Its fault is that the learner works with symbols only, not with ideas. It leaves him with dead forms. It supplies him with husks from which the kernels are absent.

2. **Dogmatic Teaching.**—This is sometimes misunderstood. As a technical term in the present connection, it is not restricted to the teaching of dogma. It includes all teaching in which ideas are conveyed, but which are to be received on authority, no reasons being assigned for what is communicated. Such teaching demanding not merely the remembrance of a statement, but the reception of ideas, the art will embrace the means by which the subject is simplified and elucidated so as to suit the minds of the learners; the devices by which attention is sustained, and the means used to test whether ideas are received, and how much of the lesson is carried away. Dogmatic teaching is allowable in matters of duty, where the child is required to obey whether it understands why or not; and also in matters of faith, and in other subjects where the reasons cannot be assigned, or where they are above the comprehension of the learner. The plan of addressing a child as if it could comprehend all that it is taught, tends to produce conceit, and to give a sceptical tendency.

3. **Intellectual, or Training to Think.**—The highest kind of teaching aims to give knowledge, skill,

and power. It tries to enrich the mind with ideas and varied knowledge, but in such a way that the pupils form ideas and work out results for themselves; so that they acquire certain intellectual habits. In the course of training, several stages, according to the purpose in view, have received distinct names.

(a) **Intuition.**—This points to the formation of ideas by an examination of things. It begins with the exercise of observation, and includes experiment to disclose qualities otherwise concealed. It eschews the use of symbols and of words, until the ideas are formed. Hence its motto is "ideas, then words." It recognises as the chief factor the agency of the child, and its test of success is in what he *does*, not in what he *says*.

(b) **Reflection.**—This is a step in advance. It is the act or working of the mind, on the ideas obtained. It involves comparison of things, and the noting of difference and likeness. It implies that active exercise of mind which is denoted by the term conception. It helps to form the habit of retention, as ideas and things are to be held before the mind; it also cultivates the mental habit of suggestion, as that which is now contemplated must suggest other things. Hence it is *productive*, and by calling into play fancy, invention, and imagination, the pupils gain more than they receive.

(c) **Induction.**—This is a still higher stage. In it the aim is to show how to investigate, for the purpose of discovering principles and laws. It sets forth a problem in the solution of which the pupil is a discoverer. The process is one in which facts are gathered and compared, and in which there is a search for a law in the light of a suggested hypothesis. The process goes on by experiment and comparison, until at length the principle is disclosed which accounts for all the facts. When this course is taken with any subject, *ab initio*, through all its known stages, the method has been called *genetic*.

(d) **Deduction.**—This is the reverse of the former, and in many subjects only possible after it. It is more frequently misapplied than any other, with the result of giving words only, or very confused notions of things. It proceeds from the principle to the instance.

(e) **Demonstration.**—This sets forth with a proposition. It makes clear its terms and scope. It adduces

proof or testimony, and it proceeds step by step till the truth is established. It is a method which implies the possession of knowledge, and that the truth is known. It may bring all other modes to its aid.

## II. Kinds of Teaching in relation to the means.

1. **Interrogation.**—Questioning holds a prominent place among the instruments of teaching. It is pre-eminently a breaking in upon a course of thought or statement to discover something which is not apparent,—namely, whether the pupil's mind is active, whether his ideas are clear, what he knows of the point in hand, and whether he is going along with his teacher.

(a) **Interrogation in its Sphere.**—As a means or instrument of teaching it has several distinct offices.

(1) **Preparatory.**—Its lowest office is at the beginning of a lesson, or point, to find out what is known, and to discover the pupil's state of mind. This should be done, because it interests the learner, who likes to state what he knows, and to receive credit for what he possesses. It should be done, too, because it clears the way for the lesson in hand, and, by defining to the learner his own knowledge of the subject, and showing to him what he does not know or clearly grasp, prepares him better to receive instruction.

(2) **Socratic.**—Questioning may be used to indicate a course of thought, to excite mental effort, to guide the mind in its work, and to lead it to the discovery of truth. Such questioning is that termed Socratic. It sets the mind of the pupil on the track over which it has to proceed, and so deals with his answers as to lead him, step by step in logical sequence, to grasp the matter in hand. It does this also in such a way, that it appears to the pupil that he is the chief worker, and that he is really only working out something he already knows. It is often a very effective method in dealing with words employed by the pupil.

(3) **Catechetical.**—Another office of questioning, having much in its purpose that is common with the former, is to convey knowledge by the mode of questioning and by exciting the mind's activity on that which has been given. It must make clear to the pupil his ignorance, or his special deficiency, and it must stimulate his curiosity. Then he is in the best state to receive instruction. In conducting the process there must be care

that the questions are not suggestive, but that the learners are actively engaged in working out for themselves the points before them

(4) **Instructive.**—A further office of questioning is to make clear what is obscure, to remove difficulties from the path, and to build up in the mind. Often a condition exists in which no other method succeeds. The children have ceased actively to follow their teacher because they have lost the clue, or the matter is not understood, and it is only by right questioning that such activity of mind is secured as that the children learn.

(5) **Examinative and Recapitulatory Questioning.**—The former is valuable as a test during a lesson, and at its close, of what has been received and understood. As a test during the course of a lesson it is essential ; for the children may not understand, and if so, the whole may be thrown away. Inversion of questions is valuable as a test. At the close of a lesson, or when testing the completeness with which a task has been prepared, the questioning should be searching, and directed to the most important features. It should be confined within the limits of the lesson, and should not give by its form any clue to the answer required. Recapitulatory questions help to bind the lesson as a whole for the learner.

(b) **Success in Questioning.**—Questioning to be effective must be *judicious*. It must be well-timed. It is only a means, and should cease when its end is gained. Every moment must not be spent in it. One of its designs is to prevent stagnation, but it must not produce a whirlpool, for then there will be confusion. As another purpose is to produce clear thought, the questions must be definite. They must not be loose, vague, or admit of guessing ; but must be well worded, not ambiguous, but be pertinent to the subject and require a specific reply. Indeed, great care should be given to the framing of questions. Their influence is so great that they deserve from the teacher much attention. Leading questions, and such as suggest too much, should be avoided, and those that require only Yes or No. The manner of questioning is an important point. The teacher must strive to get hold of every mind by the form of his question, and his mode of putting it. The questions should be addressed to the

class, and individuals selected to reply. The art of the teacher is shown in exciting eagerness to reply, holding that under control, and yet wasting no time by waiting for answers.

2. **Exposition.**—When interrogation discloses that some part of a subject is obscure, the ideas not grasped, or the hold of them imperfect, exposition is required. This is the art of conveying clearly ideas or thoughts. When an idea, as it exists in the teacher's mind, is put forth so as to enter the pupil's, or when the teacher, by any statement, explanation, or illustration, enables the learner to master that on which his mind is occupied, the method is exposition.

(a) **Explanation.**—This is the substitution of a word, phrase, or sentence, by which another is rendered simpler ; or it consists in supplying collateral information, or in giving an account of the successive steps of any process —e.g., "Obey your parents," would be explained by "Do what they tell you ;" and in the account of the "sick of the palsy," the story would be brought within the comprehension of the scholar by explaining the construction of Eastern houses.

(b) **Description or "Picturing Out."**—This is another form of exposition. It consists in describing in words what painting does to the eye. The picture must be well defined in the teacher's own mind ; its details must consist of things with which children are familiar, for if each part is not a thing of which the pupil can form a distinct idea, the picture as a whole cannot be apprehended ; and the process must be accompanied by suitable action.

(c) **Illustration.**—This also is a method of exposition. "A good illustration is worth two arguments,—it conveys what is intended, and carries conviction." Its office is to render clear what is obscure, or to deepen the impression which may have been made.

(1) **Visible Illustrations.**—Objects, experiments, pictures, and diagrams may be employed for the purpose of illustration. In so using them care must be taken that they are not introduced until the need of them is felt ; and this is the more to be insisted on, because, from the interest they excite, the teacher is often tempted to introduce them as though they were ends, not means.

Pains, too, must be taken to keep the point to be illustrated clearly in view, or the illustration may be lost in a vague examination of what is before the eye. When using pictorial illustration a verbal description should precede, when the children will be found to scrutinize the picture more minutely, and with greater interest. In the use of diagrams much skill is required to bring out the things they represent. There is danger of the teacher missing his aim, because the children often seem to follow intelligently, when they are far from realizing the thing itself. The black-board will here be found useful. By its means the teacher can confine the attention to a part, and can exhibit on a larger scale ; the process of drawing it also calls forth interested attention.

(2) **Illustration by Analogy.**—The most frequent mode of illustration is oral, or by example and analogy. In example, the general is illustrated by the particular, an instance being adduced to exemplify a general law, principle, or truth. "Obey your parents," would be illustrated by the instance of Samuel rising in the night and going to Eli under the impression that he had been called by him. Analogy, which is the resemblance of relations, as when we compare an egg and a seed, is the illustration of the particular by the particular. Thus, the dying out of a choked fire may be used to illustrate the suffocation of a man in a close room. The value of analogy is this,—if the first relation is known, the second will be more easily understood. Thus the relation of sound leaves to the health of a plant may serve to illustrate the relation of sound lungs to the health of the body.

(3) **Use of Illustrations.**—In the use of illustrations care must be taken (1) that they are *appropriate*; that the instance really exemplifies the law, or that the analogy is one that really exists : (2) that they are *familiar*; being drawn from the children's knowledge or experience, not from the teacher's reading : (3) that they are made *distinct*; sufficient pains being taken to spread out the points before the mind to leave an impression there : (4) that they are not used before they are *needed* : (5) that the *point* is not *lost* in the illustration, a danger which is greater when the illustration excites much interest : (6) and that they are *varied*, so that each may get hold of

the point to be illustrated, and that a deeper and more permanent impression of it may be left in the mind.

**3. Answering.**—This is essential to good teaching, and requires much skill and tact on the part of the teacher to obtain and to deal with. Its value is very great. It is the teacher's best means of keeping all his children actively at work, of showing how far they understand the subject, thus indicating to him his own course, and of giving them a clearer apprehension of any point,—this being a result of their effort to reproduce it in their own language. The answers which best accomplish these ends are those evincing thought and care. Children should be trained to make their answers full, exact, and neat. A full answer gives all that the question demands ; an exact one omits everything irrelevant ; and a neat one employs the most appropriate terms. Such answers demand mental effort, the habit of thinking clearly, and the use of language correctly, and they form lessons in composition and speaking. Even with young children it is desirable that their answers should be in sentences. Such answering as this is individual ; simultaneous replies—useful in recapitulation—being mostly fragmentary.

Children must be encouraged to answer ; no reply must be put aside—hasty answering, it is true, is to be discouraged, but every answer must receive attention. That which is flippant or careless should be exposed, that shame may prevent the recurrence. That which is wrong must not be hastily dismissed ; it may arise from the scholar having imperfectly understood his teacher, or may be a just inference from some preceding careless statement. Answers should not be hastily assented to ; they may be guesses, and when such a case is supposed, the grounds of the reply should be required. Those who are most forward to reply are not always the most ready, the most thoughtful. The teacher must encourage the diffident and the retiring ; the backward from indolence, and the dull, must be stimulated. When answers differ, they ought to be so dealt with, by examining the grounds of each, that the right answer may be given by the class.

**4. Challenging, Repetition, and Recapitulation.**—The great difficulty of the teacher is to keep all actively at work, and to secure that his lesson has been effective to all. No teacher should be satisfied unless he carries along

with him all his class. To aid him he must frequently challenge,—that is, require some one to take up an answer or point, and give all the grounds on which it has been based ; he must also pause now and then for repetition, going over the same ground, and presenting the same thing from other points of view ; and at the close of the lesson he should carefully examine individually, following this by a rapid recapitulation of the chief particulars.

## CHAPTER V.

### FORMS OF TEACHING.

**I. Individual.**—Individual teaching has no place in a public elementary school, unless there are boys who are exceptionally dull, or are laggard from other causes. Then it becomes necessary to teach an individual. This may often be best done by proxy, a boy set to teach a boy. But for very feeble boys, the teacher should make provision to give them an occasional half-hour in those things in which it seems hopeless to reach them in class. But though teaching cannot be of each individual separately, the teacher should accustom himself to judge of his methods by their influence on every individual. No one must be overlooked. The aim must be to teach each through the class, and to stimulate to exertion by sympathy and emulation.

**II. Class Instruction. I. What a Class is.**—A class is a group of children fairly abreast in attainment. Its purpose is to suit the matter and methods of instruction to the capacity of each child, that system being most educative which best cultivates the powers of each individual. This is most likely to be accomplished where the teacher can most thoroughly acquaint himself with the character, ability, and progress of each of his pupils ; where he can adapt his matter and methods to their individual wants ; where he can promote a healthy emulation, and where he can avail himself of sympathy. The class furnishes the opportunity. It groups according to average capacity and common attainment ; it enables the teacher to task their powers equally and to the utmost on appropriate subjects ;

and it secures the greatest amount of individual teaching, application, and progress.

2. **Efficiency of the Class.**—The efficiency of class instruction depends on the teacher securing thorough attention and mental effort from every child. For this he must mainly depend on his own skill. Nothing will secure continuous attention but appropriate matter and right methods. Yet some assistance may be gained from a few mechanical devices. The first is that of irregular questioning, not to each child in turn. A question put at the right moment, when the eye tells that attention is flagging or effort subsiding, will prove a spur, and prevent napping. To this add the practice of mutual correction. The teacher not to tell till he discovers that no one else can. A moderate system of place-taking may be allowable in the more mechanical work, the position to register attention and work, not moral conduct. Answers should be individual and full. Praise and commendation, showing sympathy and approval, are efficacious instruments.

3. **Subjects for the Class.**—The subjects for class instruction are such as have well-marked stages, and in which the design is to give skill, as reading, penmanship, arithmetic, and grammar. Those also in which, the stages being arbitrarily defined, the purpose is to store the mind with accurate and systematic knowledge; as physiology, botany, geography, and history.

**III. Collective Teaching. 1. The Term.**—Some degree of ambiguity attaches to the expression collective teaching, and the terms that are used as its cognates. The thoroughness of the teaching process, and the actual results obtained in any lesson whatever the subject, have sometimes been expressed by the term. Simultaneous teaching has often been used as its synonym, although that phrase expresses all teaching addressed to groups, whether such be only drafts, or composed of the whole school. The term "gallery lesson" is equally objectionable, as only suggestive of the best arrangement of the children, without offering any clue to the distinctive feature of the instruction. "Oral lesson" has been offered as a substitute, though objectionable as implying that instruction based on a text-book is not oral. The term is now pretty generally understood to denote a peculiar form of instruction—the conversational,—in which, with a group of the same

mental stature, formed of two or more classes, the teacher cultivates and enriches the minds of his charge out of his own mental stores, without the intervention of a text-book.

**2. Advantages.**—A juster estimate is now formed of the importance of this form of teaching in elementary schools than was entertained when it was first introduced. It is now understood to be but one of several modes of cultivating the intellect, to which indeed it is supplementary and auxiliary, and not the sole nor the principal, as was once supposed. It supplies certain forms of culture not obtained from other school methods, and it brings the teacher and children into direct contact with mental discipline as the sole object. It is of higher value to the teacher, as it cultivates in him a thoroughness, a versatility, an elasticity, a control of mind, and a power to suit his instructions to circumstances which no other form yields, but which are reflected on several others. Collective teaching supplies means of indirectly advancing the proper work of the school by the culture it gives to the faculties, and by the knowledge it supplies. Thus, lessons which cultivate the observing faculties, giving thereby an increased acquaintance with things, and an enlarged stock of words, will further progress in the lower classes in the art of reading. The same object will be accomplished in the higher classes, if lessons are given on those terms and allusions, scientific or otherwise, with which books abound, a knowledge of which is supposed by their writers, but which form an obstacle with children to reading with intelligence, and too often make the exercise an irksome task. A higher purpose of the collective lesson in the upper classes is to discipline the mind by taking it through such processes as those by which scientific facts have been discovered, or truth obtained. The study of books does not give this culture to the boy. Books give us the results, rather than the processes, of thought; but it cannot be doubted that to take children—when ripe for it—through such processes is an invigorating thing. It must, however, to be so, be slow.

**3. Dangers.**—In the hands of an unskilled teacher, no form of his work ordinarily yields such unsatisfactory results, nor is there another in which a teacher is so liable to be deceived. It requires power of the highest kind to make it really effective. The first danger, and a

source of many others, is the taking the entire labour on himself, and allowing the children to play a subordinate part, whereas real discipline of mind depends on the amount of independent exertion by the pupil. Another danger is that of being satisfied with partial results. It is found impossible to carry the whole group through the entire lesson, and the teacher consents to receive a little from one and a little from another, than which few things are more fatal to mental discipline, or to their own personal influence. The teacher is often deceived, too, in the nature of the results obtained. He thinks that the minds of his pupils have been carried along with him, that his subject as a whole is lodged in their intellect, and that they have acquired power to go through similar processes alone; instead of which he has simply made clear each point in his course, and has failed entirely to connect them as a chain of reasoning. The test—always to be applied where the subject admits of it—is to set the children a similar topic, and see how far they can carry on the process alone. Another danger, to which especially young teachers are liable, is in endeavouring to escape from these and others of a like nature, by substituting mere lessons of information for such as properly belong to collective teaching. They thus abandon the only means by which this can be made to yield any valuable results, or its employment in elementary schools justified.

4. The most Striking Features of a Good Lesson.—(a) That there is a well-defined purpose in view. That the teacher proposes to himself a definite end, and steadily pursues it. It is not necessary that such purpose should appear to the class, much less that it should be broadly stated; it is rather a rule for his guidance, a principle on which he works.

(b) That the lesson is suitable in its matter and treatment to the children. Credit should be given them for what they know, and that which they do know should be used to explain what they do not know. The difficulties which they find in understanding the subject should not be underrated, and care should be taken to solve them.

(c) That no more is attempted than can be thoroughly explained and completely learnt. A common fault is to attempt too much. “A little and well”—a few points thoroughly inwrought, will be found more advantageous to

intellectual culture than a great deal cursorily treated. Nothing irrelevant should be admitted ; when the answers of the children lead out of the way, they should be so treated as to help on the chief purpose in view.

(d) That the plan of the lesson is simple, natural, and logical, proceeding from what is known, by easy steps, till the whole is mastered.

(e) That the teaching secures intellectual activity, and clear apprehension ; that the children, by means of what they learn, work out other results for themselves ; and that the whole lesson is built up, in all its parts, as a complete fabric in the mind of each scholar in the class.

## CHAPTER VI.

### POINTS OF CRITICISM

MUCH has been said in previous chapters that would be appropriate in this connection. The more important points are here recapitulated.

1. **Design and Fitness.**—The design of the lesson and the general fitness of the matter in it should occupy attention. Is there a distinct purpose, and a clear conception of the steps by which it may be attained ? Has the teacher made thorough preparation, is his knowledge complete and accurate, and does he teach from a full mind ? Are the subject, matter, and plan of the lesson adapted to the purpose in view, and to the class under instruction ? Has the doctrine of proportion been regarded in the distribution of the matter into appropriate divisions, and have these been logically arranged ?

2. **Manner and Success.**—Other points of criticism are presented in the manner and success of the lesson. Here the first point is, whether interest is excited. This is the most essential characteristic. It is the test of a teacher's fitness for his work. Not by means of sugar-plums, for children must be accustomed to labour, but by the mode in which he approaches their minds with his subject. The next point is, the sympathy established between himself and his class. Whether he takes the right way to establish it—by his alluring manner, his

earnestness to benefit them, his patience with dulness, his control of himself, and his treatment of their answers—whether with scorn, which soon dries up a child's sympathies, or with consideration, which wins its esteem and excites its efforts. The next point is the mental activity excited and the degree of emulation produced. Here will be noticed the power of the teacher's eye, both in detecting the symptoms of inattention and recalling to duty; his vigour in challenging the drowsy and disturbing their enjoyment; his ability to adapt himself to circumstances; and his skill in availing himself of children's answers. Generally, under this head, whatever in the teacher's manner, gesture, tone, or spirit has a bearing on the success of the lesson, is a proper topic of criticism, together with the test of success, how much of the lesson it is likely will be carried away.

**3. Method.**—The method of the lesson will furnish other topics.

(a) **Point of Departure.**—This is the first thing. It ought to be something known, or something that can be observed. This secures attention, excites interest, and prepares the way for instruction.

(b) **How far Disciplinary.**—The general features of the method will next come into view. Here it must be noted whether the teacher is merely verbal, whether he communicates ideas without calling forth any further effort than is necessary to take them, or whether he furnishes material, out of which, by skilful guidance, he enables the children, by a process of induction, to gather knowledge, principles, and truth for themselves. The chief defects in teaching ordinarily grow out of the neglect of disciplinary processes. Sometimes the lesson is given in the form of a lecture, in which the children are but listeners instead of taking an active part in every process. This method affords no means of testing whether the children are receivers, nor gives the opportunity of exercising their minds on what is communicated. Sometimes the lesson is one of interrogation only,—not of that kind of interrogation in which the mind is led step by step along the path of discovery, the teacher now and then dropping an expository remark, or employing a familiar illustration; but that which partakes of the character of an examination, as though the children had

prepared the subject. Then, again, the lesson is often only expository, in which, though there may be present interro-gation, graphic picturing, or illustration by diagram, yet the teacher only aims at communicating his own ideas. A defect running through all these violations of the rules of good teaching, and perhaps their source, is the willingness of the teacher to save the chilren labour—especially as it is much easier to do all the thinking himself, than to take means to compel them to do so. Yet teaching consists in just this. Skill is chiefly shown in eliciting what the children know or have observed, and in leading them to make right inferences therefrom, and in proceeding by the rule to tell nothing which a little labour and a little ingenuity in questioning and illustration will enable them to discover ; and even when this rule cannot be observed, the *real* teacher will, nevertheless, keep before him as the chief aim, the independent exercise of their minds on what he is compelled to communicate.

(c) **Treatment of Difficulties.**—The means taken to elucidate difficulties, and enable children to form ideas, now demand attention. Here shculd be noticed the use of different forms of exposition, and the character of the questioning. The forms of exposition to be noticed in this connection are explanatory, descriptive, or picturing out, and illustration. Explanation, which has chiefly to do with language, consists in the substitution of a word, or of a simple phrase or sentence, or in communicating collateral information. Illustration is either by example, by experiment, by diagram, or by analogy. The use of the black-board should receive attention. In considering the questioning, the *form* of the question must be noticed. Some questions are simply to elicit what is known, others ought to indicate the line of thought, and others stir up the mind to its depths. The *mode* of putting the question is important, noticing whether they are put to individuals rapidly in rotation during examination ; whether to individuals previously named—which is a faulty mode,—or whether addressed to the whole, and the one to answer rapidly indicated, which keeps up the attention. The reconstruction of questions, to bring the subjects into various lights, and the substitution of simple questions, when others are above the intelligence or ability of the children, ought to receive attention.

(d) Attention and Activity.—The devices by which all are kept at work, and the means taken to make sure the ground gone over, also require attention. These embrace the points of simultaneous answering, ellipses, individual challenging, repetition, and recapitulation. Simultaneous answering is admissible when the object is to gather what is already known, and in repetition when the object is to fix more deeply what has been learnt. Never when the object is to compel every one to think and prepare a reply, nor when, during the course of the lesson, it is necessary to test the attention, and to discover how far the subject has been understood. Ellipses are associated with simultaneous answers, and aid, when employed, despatch in the lesson. Thus used they are simply a form of questioning; but the ellipsis has sometimes a higher office. This is when an idea is struggling for expression in the children's minds, but from want of language cannot be brought forth. Individual challenging is used as a means to quicken attention. It consists in calling on one to go over the last point or points of the lesson, allowing those around to indicate their power to supply deficiencies by putting forth their hands. Repetition is of two kinds,—it is simply going over afresh a point just made clear to impress it more deeply, or it is presenting it from other points of view, or by other modes of illustration, so as to bring it within the reach of more minds. Recapitulation, at the close of the lesson, is in some cases rendered more effective by writing an outline on the black-board.

4. Vocal.—An important range of criticism is that which embraces all that is vocal in the lesson. Among the points requiring notice are the children's answers, their fulness and correctness, both in style and pronunciation; their distinctness, and if without boisterousness. Especially the teacher's own style will come under review. Whether his language is simple, correct, precise, and pure, containing no unusual words, involved or long sentences, nor slang phrases; and noticing also his fluency, distinctness of enunciation, and pitch; and generally, whether the lesson is conducted without undue noise.

## CHAPTER VII.

## NOTES OF LESSONS.

1. **Necessity of Preparation.**—It has been already pointed out that preparation is one of the conditions of success in teaching. It is true that a teacher ought to be prepared at a moment's notice to teach with skill and success such subjects as reading, penmanship, and arithmetic, as these form the staple of his daily employment. But there are others which cannot be satisfactorily taught without careful preparation ; and there are some aims in teaching which cannot be accomplished without much previous thought. In these cases no degree of skill can do away with the necessity of a thorough preparation both of the matter and methods of a lesson. In all kindred pursuits where mind acts on mind, this principle is acknowledged. The writer, the barrister, the public speaker, however well acquainted each may be with his subject, never trusts to this general acquaintance when intent on producing conviction in the mind. How much more necessary then when children are the parties concerned ! The special preparation needed will vary with the individual ; but all will require adequate knowledge of the subject, accurate information, clear thought, a proper choice of matter, a right appreciation of the difficulties of the pupils, a selection of appropriate illustrations, and a well-considered mode of treatment.

2. **Notes of Information.**—That we may read up at any time any subject we propose to teach, it is worth while to make notes of what we read or think respecting it. Stitching a few sheets of paper together, and placing the title of the subject at the head, the paper is ruled so as to form three columns. In the centre column are placed all the thoughts, facts, or illustrations, bearing on the subject, that have been met with in reading, or occurred to the mind in thinking. These are not discussed, but stated very briefly, yet with sufficient clearness to recall the ideas when wanted. In the column to the left is indicated the division of the subject to which the entry belongs ; and in that to the right is marked the page of the book or manuscript where the point appears. By constant additions from reading and study, these become at length an index to one's entire readings and thoughts on the subject.

3. **What are Notes of a Lesson.**—The young teacher should present clearly to his mind what are notes of a lesson. They are not a summary of knowledge. They are not intended to show what the writer knows of his subject. They are not notes on a subject. They are intended to show, not what the teacher knows, but how he intends to teach. They will remind him what is to be taught, but they will chiefly indicate the methods to be pursued while teaching. It will be evident from his notes whether he knows his subject, but chiefly how he intends to teach it. The most important part will be the product of his own thought.

4. **Purpose in View.**—The first thing the teacher has to determine is exactly what he proposes to do ; what he proposes to teach, and why he proposes to teach that. His purpose must be clear to himself. He has not only a subject to teach, but a mind to train ; not only information to impart, but faculties to cultivate, and powers to discipline. His purpose must be held distinctly in view. It will determine the methods to be employed, and on it will depend the unity of the lesson, and its effects on the class. It should secure that each lesson has a beginning, a middle, and an end. For the lesson should be a whole lesson and not a mere fragment. It is equally necessary that he should determine exactly how much he will teach. A common fault with some young teachers is to attempt too much. No more should be provided than can be taken in the time. It is not the completeness of the subject, but the thoroughness of the instruction that should be the aim. A child cannot learn much in one lesson, and a group cannot learn fast. That a thing may be grasped even by one child it is often necessary to present it in many ways, but this becomes imperative if it is to be secured to all. It is also necessary to its attention that it should be presented many times. Hence, a little and well, a few ideas and thoughts thoroughly inwrought, will secure the object better than a great deal attempted. The test of success must not be the ground covered, but the culture secured. How much has been added to the child's stores, and with what discipline to his mind ?

5. **The Class to be Taught.**—It follows that there must be present to the mind of the teacher the class for which the lesson is intended. Lessons prepared for one

class are seldom found exactly to suit another. It is necessary to adapt the lesson to the mental development of the children, their previous knowledge of the subject, their general attainments, and the difficulties they are likely to encounter. Notes are of value chiefly when prepared in special reference to the pupils' needs. Hence the subject must be dealt with in this light. The learner must never be out of sight, never absent from the teacher's mind. Failure must result where this is neglected. Two faults are prevalent with young teachers. One is taking up every subject *ab initio*. Though it may form one of a course, and much information may be possessed, yet the pupils get no credit for what they know, and time is wasted on preliminaries which are perfectly well known. Thus little advance is made, and the children become disgusted with the wearisome monotony. The other fault is taking subjects which imply knowledge not possessed, or starting at a point which previous attainments do not warrant. In this case the lesson makes no way, from the necessity of turning aside to explain matters which ought to have been given before the lesson was attempted. The results are, the children get confused, they have nothing on which to fix their minds, the object of the lesson escapes from view, and the preparation has been thrown away.

6. **Limits of Notes.**—When writing notes their design should be borne in mind. They are to fix the limits of the lesson, and they are to indicate the methods. It is necessary to remember that they are notes, not a full treatment, not the lesson. They need not show all that is intended, they are not to be what a short-hand writer would present after hearing the lesson. They must not be crowded with details, they must not be a string of questions, they must not contain elaborate disquisitions. They should indicate the points to be worked out, the difficulties expected, the illustrations to be used, and the course by which any point is to be developed, and its admission into the mind secured. Notes should be brief, expressed in short sentences, not fragmentary phrases; they should not be slovenly in expression, or ungrammatical in form. They should be intelligible to an examiner.

7. **Divisions of the Lesson**—The matter should be distributed into proper divisions. These should not be

too numerous. The arrangement should be natural and logical, not arbitrary. A good arrangement secures a readier reception, and a steadier and more permanent grasp of the subject. It is an advantage both to teacher and scholar. The points must be distinct, clear in thought and fact; there must be no cross divisions, for clearness of thought in the teacher is necessary to clearness of apprehension by the scholar. Previous to writing the notes it is well to make a rough outline, allotting to each point its proper place, and securing to each its proportionate treatment. Two common faults are to be avoided. One is the practice of an elaborate introduction. That is the best introduction which places the subject most speedily and clearly before the class, and which in doing so attracts the children and whets their curiosity. The other faulty practice is that of forming lessons in a given subject on a stereotyped plan. This is opposed to the principle of starting from what is known. The only safe rules in drawing up notes are those which must be observed in teaching. Begin with the known, proceed from the simple to the complex, let each point grow out of the preceding, and set each point where possible as a problem to be solved. If each point is embodied in a pertinent question, a question which puts the class on the track without disclosing the goal, it will be found a valuable aid.

**8. Arrangement.**—Young teachers may find advantage from arranging their notes in two parallel columns. The narrow column would contain the outline of the lesson. It would display under brief heads the points of fact or thought, which would correspond with the outline on the black-board at the close of the lesson. The wider column would contain the notes of the lesson.

## PART II.—ARTS AND INSTRUMENTS:—METHODS OF INSTRUCTION.

**Instruments of Learning.**—It has been assumed that ordinary school life divides itself into three periods:—development, acquisition, and intellectual operations. In the first of these periods the chief aim is to put the mind of the child into contact with nature and external things, and to give it the use and control of those of its powers which are more immediately connected with its senses. This aim is sought mainly through object lessons and those exercises which form Kindergarten work. But as the great purpose of all school instruction is to fit the learner for self-application and independent effort at a later time, there has to be joined to these exercises instruction in those arts which are the indispensable instruments in all further progress. Then as the age of the learner increases and his powers grow, there comes a time when the acquisition of these instruments becomes—for a period—the main work of the school; but relieved by daily lessons on objects and common things. These necessary instruments of culture are the arts of reading, writing, and arithmetic.

### CHAPTER I. READING IN INFANTS' SCHOOLS.

READING is the association of words with written or printed signs which represent them. Learning to read is learning to recognise such signs, and to associate them with the words they stand for, so that on those being seen these shall be instantly forthcoming. A fair consideration of this will show that a child's first lessons in reading

are not to give him the sounds of which words are composed, for he can already speak, but the signs which represent the words ; that his first lessons should consist of sentences formed of words with which he is familiar ; and that the more familiar and extensive a child's knowledge of words in speech, the more rapid generally its progress in reading. These first lessons have to accomplish two things :—the child has to learn the signs by which words are presented to the eye, and he has to acquire the power of pronouncing words at sight. The first requires him to recognise letters and words when seen, the second to know the powers of the letters, and to construct words thereby.

### Section I.—Recognition of Printed Words.

The object to be secured is to make each word-sign familiar to the eye. It is to be a picture, recognised when seen, and distinguished from all others.

1. **The Alphabet.**—As all word-signs are made up of the alphabet, and differ from each other only in the order and number of letters, the first step is, usually, to teach these characters. Many have been the devices to accomplish this. Often it has been thought that it would aid the process by having their names first committed to memory, the power to say the alphabet being deemed a help to recognising the letters. An advance on this rude process was that suggested by Locke of having the letters on a many-sided block, which was to be thrown or spun, the child to recognise and name the letter turned up. The obvious objection to this is that it makes an amusement what ought to have the aspect of work. Others with a clearer conception of their work have selected for first lessons such letters as are most easily distinguished, and when combined would make familiar words ; as O.S.X. B.Y.M., Ox, Box, My box. Others, as Pillans, would have the letters arranged “in brotherhoods according to the organs of voice used in pronouncing them, and would teach the child the knowledge of his letters at first and for a long time, in this way only.” A plan in advance of all these has been by means of a letter box, or black-board, to exhibit one letter, and then set the pupil to find one like it, and then learn its name. But the method introduced by Bell has claims above all others. It is that of teaching the pupil

to draw the letter, and then learn its name. This process combines from the first the two great instruments of teaching and reproducing—the former giving knowledge, the latter testing it and giving skill.

2. **Word-signs**—The knowledge of the letters does not give power to recognise the word-signs. These become familiar, distinguished from all others, and instantly recognised, through being frequently seen. The methods employed are for the twofold purpose of enabling the learner to recognise words, and to pronounce them at sight. They will thus come under notice in the next section. They may now be briefly indicated. The common plan is constructive. Words are before the child, each letter in succession is named, and then the word pronounced. A better method than this is to teach the children to write the words, the act of copying compelling attention to the whole as well as the parts. Another plan is to place words before the child and to get it to recognise them as such. This is done by showing a word and setting the child to find the same word elsewhere. This plan is an effective one, when the words are familiar ones formed by striking letters, and when these words are grouped variously in sentences. It is well to remember that all the preceding plans are lessons in *form* rather than in reading.

## Section II.—Power to Pronounce Words at Sight.

The chief aim in first reading lessons is to endow the child with power to read words which it has not before seen. In other words, to make it familiar with the sounds or powers of the letters, so that it may discover for itself how to pronounce new words.

I. **The Spelling or Name Method.**—In this method printed words being placed before the child, his attention is directed to each letter in succession, which he names, and pronounces the word on the teacher saying what to call it. This is a method of learning spelling and reading at once, or rather of learning to read by learning to spell. There can be no question that if these two proceed side by side, on the right method, the one will help the other; both employ the eye on the forms, the chief difference being that spelling detains the eye longer than

reading, because each letter is regarded in succession. The objections to the method are the following :—1. The attempt to combine two things in one lesson, by diluting the learner's attention, interferes with his progress in recognising the word-signs. 2. Spelling is best learnt by endeavouring to fix the whole form of the word upon the eye before minutely examining its parts ; the name method thus reverses the process which is found to be the most effectual both for reading and spelling. 3. This method has no power in itself to enable the learner to master other words, for, not to insist on the want of association between the names of the letters and the sound of the word, practical acquaintance with the powers of letters and their various combinations, which alone gives the learner power to utter at sight newly occurring words, comes from frequent reading, and not from any spelling whatever. 4. As frequent repetitions of the letters of a word will at length suggest the word itself, this method encourages indolence, for the learner does not put forth the degree of attention necessary to master the words so long as he has this slovenly practice to fall back upon.

**II. Phonic Methods.**—A phonic method aims to make the learner acquainted with the powers of the letters, so that when words are before him he may construct their sounds for himself. There are several of such methods.

**1. The Common Method.**—One method, usually distinguished as *the* phonic, is to teach the sound of each letter separately, instead of its name. This, of course, in the case of consonants is impossible, so that the method is really but a variation of the name-spelling method. Thus bat, instead of being bē-ā-tē, is bē-ā-tē. This may be a nearer approach to the sounds than that by the ordinary names, but evidently the consonants are not sounded alone. But the method does not accomplish its object. If it did, the learner on seeing a new word should construct it out of its elements ; but as a matter of fact he gains no such power until much practice in reading makes it possible. Besides this objection there is the further one that with some letters the method tends to a habit of stammering. But it is not the consonants only that present difficulty, there is the variety of vowel sounds. The Edgeworths, who introduced the method, proposed to meet this by attaching to each vowel-letter a mark by

which it should be distinguished and mistake prevented. This was found so to complicate the matter, that few lesson books have retained it.

**2. The Phonetic Method.**—Supposing a purely phonic method possible, still it could not be applied to a language like the English. Such a method would require the number of letters and of elementary sounds to correspond, the same letters always to represent the same sounds, and in the spelling of words the number of letters and of sounds to agree. But these conditions do not exist in English. The letters are but five-eighths of the elementary sounds, one letter often represents two or more sounds, some sounds are represented by more than one letter, and by combinations of letters, and often letters are silent. To meet this, advocates of a phonic system have suggested what they call a phonetic method, or the reconstruction of our alphabet and of our spelling. They suggest an alphabet in which all the elementary sounds shall be represented, and in which there shall be no redundant letters ; and they would have all words spelled as pronounced. To such a method the objections would still lie as to the common method, while it would encounter a still more serious obstacle in those variations of speech which are found in different counties, and which it would be powerless to remove.

**3. Phonic Analysis and Synthesis.**—The advantages sought by a phonic method are to a great extent gained by applying analysis and synthesis to familiar words. The method of phonic analysis consists in the teacher slowly uttering a word and drawing attention to his mouth while doing so. Then the learner utters the word, and this process is continued until the child discerns how a particular sound is produced. The word is then written on the black-board and pronounced, next the initial letter is written apart, and the word is slowly sounded again, and the learner is told that the letter written apart is the sign for the sound now acquired. Thus, suppose it is the power of *m*. *Mat* is slowly and forcibly pronounced by the teacher, attention being directed to his mouth ; the children then pronounce it, and are required to notice how they use their lips and mouth ; *mat* is now written on the black-board and pronounced as before ; then it is written *m*—*at*, and again pronounced, and the children are told

that m stands for the sound they are now supposed to distinguish. With this method of analysis is joined that of phonic synthesis. The advantages of constructive methods are very great, and these are secured by this process. It is one of word-building. The terminal sound is written on the board as at, and then words are constructed by placing initial consonants before it, thus, bat, cat, fat ; est, lest, blest, and so on.

These methods employed in connection with spelling, not reading, would be helpful to reading by directing attention to the structure of words, thus training the eye ; by making the learner acquainted with the powers of the letters, thus enabling him in some cases to construct the sounds of words for himself ; and by promoting force and distinctness of utterance and purity of pronunciation. As methods of teaching reading, they are open to the objection that they fix attention more on the parts than on the whole, and to the extent that they do so are a hindrance to the learner's progress. To be done effectively, a progressive series of lessons is required, in which the several powers of the letters, and the chief difficulties in spelling, come gradually into view.

**III. Look-and-Say Method.**—This method is that in which, after children have mastered the alphabet, all words are read without spelling. Attention is directed to each word as a whole, and its sound associated with it as a whole. In no case is the learner allowed to spell a word that he may afterwards recognise and pronounce it. The following things are advanced in favour of this method :—

(a) **For Mastering the Word by the Eye.**—When children come to school to learn to read, they already talk ; that is, they know practically words as sounds ; the end then to be sought is, to teach them under another form that with which they are already familiar in one form. In other words, they have to learn words when spread out before the eye in written or printed forms. Hence reading in the first stage is a matter for the eye. Now things are presented to the eye in the mass, and it is by experience only that the eye acquires power to distinguish the parts ; it is as familiarity increases that details are noticed. This is true in the case of printed words. It is by frequently seeing these that they become familiar, and that power is acquired of seeing every letter.

That this does not exist from the first is evident from the fact of learners often miscalling words which resemble other words, and from the further fact that boys can often spell a word correctly who fail altogether to point out a mistake when it is wrongly written. This position is strengthened by the analogous case of infants learning to recognise the words addressed to them. Here the whole word falls on the ear, and its whole sound, and not its elements, brings up the idea for which it stands. It is true that when learning to speak, that is, to produce the *words it knows*, the child does so by synthesis, uttering parts of words before the words themselves; but this is true of all reproduction, the parts before the whole. Yet it does not weaken the position that the knowledge in these cases must be first of the whole, then of the parts.

(b) **Power of the Letters.**—It has been claimed for the name and phonic methods that they give power to master new words, but that the “look-and-say” method does not. If this were true, it would be a fatal objection; but it is altogether a mistake. The fact is, that all who learn to read, whatever may be the method, get practically acquainted with the powers of the letters, and this not by virtue of any special instruction, but by an induction from experience; which is to say, that it is only by practice in reading that any acquire a practical acquaintance with the powers of letters and syllables. Now the “look-and-say” method, by furnishing practice in reading from the outset, is that which is most favourable to this inductive process, and a child taught on it will acquire practical acquaintance with the powers of the letters sooner than by any other method. But we may go a step further, and contend that the principle of this method alone accounts for any success attending other methods. The ability to read at sight, whatever method is employed, is due to the familiarity of the eye with printed words, and of the ear with the combinations of letters. In both synthetic methods, the pupil has to be told words after spelling them, and if he ever masters a word by spelling it, it is because experience drawn from reading has made him practically acquainted with the powers of letters and syllables, and not from any power that spelling gives.

(c) **Utility in Schools.**—It best meets the requirements of class instruction. In the class the aim is to bring

out the energies of all. This is done through emulation and self-respect. Now when spelling is permitted, a child has little inducement to exert itself to retain a word once seen ; but let spelling be forbidden, let the remembrance of the word be thrown on the eye, and emulation will stimulate some to retain it, and to give it when called upon ; and self-respect will be appealed to in the others, not to require to be always told by a sharper companion. It is a method which requires no special preparation, like the phonic, and therefore may be entrusted to the hands of a monitor.

### Section III.—Course of Lessons in Infants' Classes.

In teaching young children to read, the plan that is found to yield the best results, after the preliminary exercises on the alphabet, is to have two courses daily. A spelling lesson, making large use of phonic analysis, and, at a distinct time, a reading lesson in which no spelling is allowed.

1. **The Alphabet Classes.**—Early lessons in reading should be based on writing. The teacher who confines himself to enabling his pupils simply to recognise printed letters and words acts unwisely. A better plan is to commence with drawing straight and curved lines ; then, when some skill is attained, to select a few of the simpler letters, the teacher to write them on the black-board, the children to imitate them on their slates and to learn their names. It is not necessary to teach all the letters before introducing words. A good plan is to arrange a series of steps, at each step introducing new letters and words, and the children to frame little sentences out of the words learnt, and to read them from the *written* copy, not word by word, but grouped as when spoken. Such lessons, carefully graduated, properly superintended, and conducted in a lively, cheerful, interesting way, will give the learner the names of the letters, power to read little words at sight, and some little ability to copy words on slates.

2. **Tablet-lessons.**—The first lessons should consist of words of two letters. They should be in bold type, and should not be crowded. They should be read without spelling. The teacher should point to each word in succession and pronounce it, the pupil to follow him. When

the power of reading little sentences with facility is gained, words of three letters should follow ; but these need not detain the learner for any length of time, as his eye will soon be able to recognise words of larger form.

**3. Phonic Spelling.**—During the time that the child is learning to read, his progress may be promoted by concurrent spelling lessons, conducted on the method of phonic synthesis. These lessons should deal with monosyllabic words in a systematic way. Such words are of two classes : those in which the number of letters exceeds that of elementary sounds, and those in which the letters and sounds are equal. The first lessons should consist of the latter class. But such words as bat, bar, agree in having the same number of letters as sounds, but the vowel sounds differ ; to introduce both indiscriminately would tend to confusion. Some modification therefore must be made.

**(a) Normal or Short Vowel Sounds.**—In such lessons as these now contemplated, some advantage will be had if through the first series each letter retains a constancy of power ; and it would be advisable at first to introduce only the short vowel sounds, as these are the normal or most frequently recurring. Such lessons would consist of words of three, four, or five letters, as bat, cat, fat, flat, plat ; best, rest, blest ; and land, brand, grand. In their course through these lessons, the pupils' attention should be directed to the common element in each group of words, by both eye and ear. They should be taught to separate the roots at, et, it, ent, and, est, &c., from the teacher's slow and forcible utterance of the words. Then, the teacher writing a root on the black-board, they should be led to recall all the words of which it forms a part, the teacher supplying where the scholars fail, and writing each on the board. Each word in the list should then be read over several times distinctly and forcibly, after which the class might copy the words on their slates.

**(b) Name or Long Sounds.**—The second series should give to the pupil practice in the long or name sounds of the vowels, and should make him familiar with the several devices by which these are indicated. The first step would consist of words ending in e, as mate, bate, late, fate. The second step should introduce all the monosyllables in which two vowels come together, but only the first sounded, as

eat, beat, meat, seat ; gain, grain, main, rain, brain. The third step would contain all the words in which two vowels come together, but only the second sounded, as grief, piece ; pier, pierce ; break, great.

(c) **Middle and Broad Sounds, and Diphthongs.**—This stage should gradually introduce the more difficult sounds of a, o, and u, as in far, fall, dove, do, full ; and of the diphthongs i, oi, ew, ou, as in fine, voice, few, pound. By having lists of words read and written on each sound, and by lists framed to exhibit the several ways in which the same sound is represented, as the sound of a in all, brawl, haul, lord, or of u in fume, few, feud, the ear and the eye will become familiar with each variety, and the voice gain power over the pronunciation.

(d) **Difficult Consonants.**—Throughout the foregoing series opportunities will have occurred to practise on words containing the more difficult consonants and combinations, yet it would be well at this stage to make lists of words for such practice. Words beginning with w, y, or h, others containing l, r, s, or the combinations br, fr, bl, fl, st, str, wh, ch, sh, &c., should be sufficiently practised to enable the learners to give them correctly.

4. **Reading Books.**—(a) **First Books.**—In placing a book for the first time in the hands of a child, he should be carefully instructed in several points and superintended until he has learnt them. How to hold his book and himself so that he may breathe freely and be at ease. His attention should be directed to the leaves and to the paging. He should be practised in finding a given page until he can do it with facility. Care should be taken that he follows the reading of others, and for this purpose he may for some time point with his finger to each word as it is pronounced. His first book should contain the same lessons as those on the later tablets, and the lessons should be read alternately from tablets and from books. The learner will thus sooner master some of the difficulties in the first use of a book.

(b) **Other Books.**—In advancing to other books the chief aim of the reading lessons in an initiatory class—to enable the pupil to recognise in print the words with which, as spoken, he is already familiar—must ever be kept in view. The time has not yet come when his vocabulary is to be enlarged by books ; that properly is the province

of object and other conversational lessons. The mastering the words and sentences ought to give a sort of pleasant surprise, in recognising, under another form, things with which he was previously familiar. The subjects, also, of the early reading lesson ought to be familiar things, that in encountering the difficulty of form there may be no difficulty in the matter. The lessons ought to be short, as it is impossible to fix the attention of young children but for a brief space ; but nothing is lost by this, for, as the Edgeworths remark, short lessons with earnest attention accomplish much more than long ones and desultory attention.

(c) **Course in each Lesson.**—The course of a reading lesson suitable to initiatory classes is as follows :—

(1.) **Mastery of the Words.**—Each sentence to be read once by the teacher, then word by word in rotation by the children, then by one or two indicated by the teacher. During this step the teacher should have recourse to the black-board in all cases of difficulty.

(2.) **Distinct and Significant Reading.**—Young children may be taught to read what they do read with fluency, emphasis, and intelligence. To secure these there must be sufficient individual practice in reading sentences and groups of sentences, in order to give them that command over the organs of voice which is necessary to fluency ; care must be taken that each word is full, distinct, and smartly hit out ; pains must be given to obtain right accent and emphasis ; and interest should be excited, and the basis of intelligent reading laid, by seeking from the children the ideas which the words and sentences suggest to them.

(3.) **Observing the Spelling of Words.**—This may be promoted by using the black-board for the analysis of words ; by spending a few minutes at the close of the lesson in oral spelling ; and by having a part of the lesson copied or dictated subsequently to the reading.

(d) **How the Lesson is conducted.**—The spirit in which the early lessons are conducted will materially affect the results. It is essential that the child shall have a liking to the work in which it is engaged. This cannot be unless patience, kindness, good humour, ingenuity in framing little devices to meet his wants, and the power to excite curiosity and to obtain an intelligent activity, are

combined in his teacher. It is, perhaps, the spirit of the teacher rather than his methods that explains success in teaching little ones to read.

## CHAPTER II.

### READING IN JUVENILE SCHOOL.

In forming his plans for reading lessons in the juvenile school, the teacher should settle in his own mind what he may reasonably hope to do in the circumstances in which he is placed. That which a teacher in one district may accomplish with ease, may be altogether impossible in another. The degree in which the speech is provincial, the intelligence of the children, and the length of time they stay at school, must be taken into account when fixing the standard of attainment. One thing should be attained everywhere,—the children should learn to read with fluency. Reading, to children leaving school, should not be so difficult a task as to frighten from it. Where circumstances are favourable, more should be attempted, but in every case in subordination to this.

#### Section I.—General Principles and Methods for Infants and for Juveniles.

**Rules.**—Method in a juvenile school differs from that of an infants' school, in throwing more upon the learner. In the earlier stages of his course teaching precedes learning; the pupil's steps are guided and upheld by his teacher; his way is cleared for him, and his difficulties are anticipated. But now this must be *gradually* changed. The power acquired by the pupil must be exercised in preparing his lesson and grappling with difficulty; the teacher giving him that degree of assistance which will stimulate but not supersede his own exertions. The teacher should *now* throw the work of mastering a lesson on the class, the individual being stimulated by the correction of his fellows, and the teacher stepping in only when others fail. When mechanical difficulties are mastered, the teacher's exemplar reading will be required, to assist the learner in acquiring a good style of reading.

**2. Conditions under which Conducted.**—(a) As far as possible from noise and distracting sounds; hence

those in drafts ought to be in the vicinity of silent classes, and a lesson by the master in the art of reading should be, if possible, in a class-room. The advantages flowing from quiet are,—attention is easier, the ear is more susceptible of cultivation, and the ear is better able to attend to those niceties of expression and tone required by good reading. (b) Opportunity to speak out is helpful to a good style of reading ; hence, also, the value of a class-room, or of a position where it would not disturb others. By speaking out the learner gains more confidence in himself, and this facilitates his progress ; the effort being greater, a better command is obtained over the organs of speech, so that distinct and forcible utterance sooner becomes the habit ; the temptation to slur words is removed ; and the utterance, being slower, is more likely to be accurate, or, if not, the inaccuracies are more discernible. (c) Each stage of the learner should have a definite series of lessons, the length and number increasing at each stage. The advantages are,—the learner, knowing that a certain amount of progress is to be made in a given time, is more likely to work with a will than when the work is indefinite or determined by caprice ; knowing, too, that advancement to another class or a higher stage depends on mastering his present series, he has an additional stimulus to work. The teacher also is benefited. There is nothing haphazard in his work. He knows at any moment the work done, or being done, by every class and every child, and he is thus better able to care for each.

3. The Teacher's Work. — The teacher should remember that it is his place to instruct in the art of reading ; he has not simply to *hear*, but to *teach*.

(a) Chief Points.—In the earlier stages he may facilitate progress by writing the new words on the black-board, separating their syllables, syllabifying them and explaining them. He must see that the reading is slow, that it may be forcible and distinct ; and whenever occasion demands, he should utter words forcibly, drawing attention to himself while doing so. As the children advance he must make clear, chiefly by his own reading, the importance of accent, emphasis, pauses, pitch, and modulation of the voice.

(b) Correction of Faults.—At all stages he must attend to the correction of faults,—the mistakes to be

discovered and the correction made by the children ; but the teacher must see that the correction is made both by the reader and the class. For the readier detection of faults the teacher should listen with closed book ; for if his eye runs over the passage with the reader, he has therein an assistance to sound and sense which largely blunts the keenness of his perception of faults. For the correction of the faults of the younger children the reader may be interrupted, as those requiring attention are chiefly transgressions against purity and distinctness ; but as facility is acquired the correction would be better at the close. Interruption distracts the attention of the reader, and weakens the force of the correction ; it throws away an opportunity of improving attention and memory ; and it prevents the notice of the class of errors which affect the perspicuity and impressiveness of the reading. In stimulating children to discover and correct errors, care must be taken of the spirit in which it is done, that they become not captious and fault-finding ; nor should guessing or exaggeration be allowed, nor criticism expected above their intelligence.

(c) **Exemplar Reading.**—Teaching to read requires that the teacher should often read for imitation by the learner. Here, as in other things, the example of the teacher is necessary to explain his precept. But more than this, reading and speech are much influenced by imitation, from the inherent tendency to imitate those with whom we associate. This fact shows the importance of the teacher's speech being pure, distinct, deliberate, and impressive ; for the school will image forth these qualities if found in him, or will be deficient in them if he is so. The teacher is unwise who neglects so powerful an instrument as this. The master who would avail himself of it to the utmost will have set times to read to a class, a section, or the whole school, as well as when conducting a reading lesson.

(d) **Attention and Criticism.**—The teacher has to stimulate attention. This is no easy matter. The learner to read has a twofold object of attention : he has to listen to the reading of others, that he may mark their errors and profit by their work, and he has, at the same time, to give his attention to the matter, that he may learn to read with profit, exercise his memory, and lay the basis for a supple-

mentary exposition. Now the more completely he does the one, the more difficult will he find it to do the other. The teacher must aim to secure both. The mind of the listener must be in his ear, while his eye is running on with the reader. Devices must be at hand to quicken attention and intelligence ; such as directing one to read all the sentences immediately connected in sense, the others to indicate if he falls short or goes beyond his portion ; not assigning a definite portion to be read, but at the teacher's discretion stopping the reader, and telling another to proceed from that point. To these devices add that of mutual correction and criticism, examine subsequently on the lesson, and especially let the teacher himself be lively and agreeable.

4. **Children's Practice.**—Oral reading in schools occupies the position of an instrument, and of a test. As an instrument, it aids to fix attention, to impress the memory, and to give facility of utterance ; as a test, it gives to the teacher the knowledge of his pupil's progress. Of the amount of practice required in oral reading there should be no misgiving. Like all mechanical acquisitions, it requires frequent practice to give command of the organs, and the ability to perform with ease and readiness. Yet a practice often prevails of continually stopping the reading for explanations of the lesson, thus diminishing the time for practice, and really occupying attention on something else than the art of reading. Not that exposition should not be given. Exposition quickens the intelligence, and thereby increases the power of the learner to seize and retain whatever is presented to him ; but its place is not so much to enable him to read his present lesson well, as to give him power to read any lesson well. But exposition must not diminish the amount of practice, hence it would be better to assign it a distinct time. Sufficient practice is not secured by sentence-reading, even though often recurring. This does not give sufficient interest in the exercise, nor the command of voice and attention required for continuous reading. At every reading-time, two or three should read the whole lesson ; others, paragraphs or groups of sentences combined in sense ; and others, sentences ; care being taken in the course of two or three lessons to secure the lengthier portions to all.

5. **Qualities to be sought.**—(a) **Fluent Reading.**—

Reading with fluency implies the power of instant recognition of words by the eye, with a knowledge of their pronunciation ; command over the organs of speech, so as readily to utter the words singly or in groups ; *i.e.*, by phrases, sentences, or paragraphs ; and perception of meaning, so as to group the words properly into phrases or sentences.

(b) **Correct Reading.**—“Correct reading puts the listener into as good a position as the reader.” (1) It includes distinct, clear, and forcible enunciation. Every sound, whether of word or phrase, is heard. This depends not on the loudness, but on the force, with which the organs of speech are compressed ; *i.e.*, it depends on the consonants. “In just articulation the words are not hurried over nor melted together ; they are neither abridged nor prolonged ; they are not swallowed, nor are they shot from the mouth ; neither are they trailed, and then suffered to drop unfinished ; but they are delivered from the lips, as beautiful coins are issued from the mint, deeply and accurately impressed, neatly struck by the proper organs—distinct, sharp, perfectly finished.” (2) Correct reading also includes purity of pronunciation, which consists in giving to each letter its right sound, and to each word its proper accent. (3) It requires that the mode of reading should indicate the stops,—that is, the pauses which are indicated by points, not those demanded by the sense ; and it further requires that all italicized words should be indicated either by stress of voice or some other mode.

(c) **Intelligent Reading.**—Intelligent reading is that in which the construction and meaning of every sentence is made plain by the inflexions of the voice, but with no purpose of conveying the impression that the sentiments read are those of the reader. This style requires distinct articulation,—words that are joined in sense to be joined in pronunciation ; proper pauses and emphases, and the relations of phrases and clauses to be shown by the voice. Hence it depends on accent, emphasis, and modulation of the voice.

(1) **Accent.**—This is a stress or bounding of the voice, followed by a slight pause, which groups in pronunciation those words that are so closely combined in sense as to convey but one notion, and to separate which would be

to destroy the sense. It also draws attention to that word on which the notion to be conveyed depends. By means of accent, phrases are read, not as a succession of words, but as a series of notions, which are in this way made distinct. In fact, accent is the expedient by which every distinct notion is separated and distinguished in reading. In some cases two phrases are so intimately joined in sense as to form but one compound notion ; at such times two accents are heard, a primary and a secondary,—the primary being placed on the word that limits the phrase, or renders it more specific.

(2) **Emphasis.**—This removes the accent from its natural position to some other word in the phrase or clause, and by this means secures one of three things. It brings out a contrast which the natural accents would not imply ; as, “He put it *on* the table.” It groups round a word all the other words of the clause, and so connects them in utterance as to make it the pivot on which the meaning of the sentence turns ; as, “He speaks like a senator.” It imparts to a sentence a meaning which the terms and construction alone would not warrant ; as, “When men are determined to quarrel, *a straw* will furnish the occasion.” There can be no better test of a reader’s comprehension of the meaning of what he is reading, than this placing of the emphasis so as to bring out the concealed import. There are other modes of marking emphasis besides accent ; as tone, pitch, speaking in a whisper, lengthening the quantity, and by pausing before or after, or both.

(3) **Modulations of the Voice.**—These, as pitch, inflexion, and tone, are elements of prime importance in intelligent reading. This much is true. It is not so clear that much can be done by rule to secure them. It is to be feared that an artificial style of reading would be produced, from which nature, sense, and taste would disappear, if teachers were to drill their children in exercises on inflexion and tone. Still the teacher must give his own attention to such points, and his reading should be so good and so frequent, that his pupils may learn to distinguish the rising, suspension, and falling of the voice, and its various tones ; and it must be his business to attend to the pitch of voice with which they commence, taking care that it is the natural pitch in which they speak. Thus only will he keep them from monotony, as there is a

natural tendency to raise the pitch with the primary accent when they begin on the natural key, and as natural to miss doing so when the pitch is higher than it should be.

(d) **Expressive Reading.**—This holds a sort of midway position between significant or intelligent reading and speaking. It consists, where it is possible to do so, in adopting the sentiments and assuming the feelings of the author, and giving effect to them by the voice, countenance, and gesture. Where the sentiment or feeling is affected, and the manner imitated, the reading is acting. To read with real impressiveness, the emotion must be real, and, as Whately says, “the reader must not think of himself at all, but be lost in his subject.” Recitations of pieces with which children can sympathize will be found useful aids to expressive reading.

6. **Supply of Books.**—Two things should be sought in connection with school reading. (a) To secure as good oral reading as the circumstances of the school admit, (b) and to promote the habit of reading amongst the children. The latter altogether, and the former very materially, depend on the books provided. In all cases the conditions of his intelligence should be considered, and such lesson-books provided as will interest him. It would be desirable to supply a variety of books to each class; one somewhat difficult for the learner to master, as he has to make his way to the position of ability to read any book, but also others presenting no mechanical difficulties, but full of matter to interest and allure. The pleasure from these would send him with quickened zeal to master his harder book. A library of books, suited to the several stages of the learners, would, if properly managed, help on the same end. Encouraging the children to commit to memory such pieces as interest them, and providing opportunities to recite them to their class, or before the school, will give them interest in books, as well as help them to a good style of utterance.

## Section II.—Reading in Junior Classes.

I. **Mastery of Mechanical Difficulties.**—When children from the illiterate classes of society pass from their early lesson-books, they encounter difficulties which are unknown in schools of a higher grade. In fact the difficulty of teaching children to read is found—in common

elementary schools—at this stage ; the non-recognition of which by school-book compilers and teachers is the chief reason so few children learn really to read at school. That which constitutes the difficulty is the introduction of the pupil to what is to him a foreign tongue. He is continually encountering words which are at once unfamiliar to his ear, his eye, and his intelligence ; to which is added in most books the difficulty of a complex style. The results are that the pupil is continually stumbling at words, and if not well watched gets into habits of slurring and mumbling. To meet the difficulty, amongst others the following plans have been tried.

1. **Spelling.**—All the new words are gathered in columns, and the children made to spell and learn them. This practice, which most extensively prevailed in the older schools in connection with spelling-books, though not successful as a mode of teaching spelling, was certainly successful as an aid to reading. Constant repetition of the words made them familiar to the ear, and occasionally glancing at the words made them sufficiently familiar to the eye as to be recognised when met with in the reading lessons. In some schools, in addition to the repetition, explanations are given by the teacher. By this means they take a firmer hold of the mind.

2. **Simultaneous Reading.**—This device is found in several forms.

(a) **Single Words.**—One practice is thus described by Canon Cook :—“Children appear to learn most rapidly and with least defect of pronunciation on the following system. The monitor reads one word, which is then clearly pronounced by the first child, then repeated by the whole class, and so on to the end of the sentence. This should not be done more than twice or thrice, then the lesson may be read round the class, word by word, without the assistance of the monitor ; they may then be called upon to read the lesson separately.” The obvious defect of this method is in the uncertainty that the learner is following with his eye while repeating after the monitor. This is sometimes avoided by having the class repeat word by word, *i.e.*, making a pause after each, the teacher pronouncing words only when there is any hesitation.

(b) **Phrases.**—A method introduced by Dr. Bell, and termed by him “practical analysis,” is that of reading by

notions. This involves reading sometimes a word, sometimes a phrase. The advantage of this plan over that of single words is that more attention can be given to inflection, and thus a foundation may be laid for right emphasis and expression. Another advantage claimed for it is that children thus become practically acquainted with the structure of sentences, and are thus under preparation to give the sense when they read. Thus in 1816, before Brougham's Committee, one witness attributed the great superiority of the reading in National schools to that in the British, to this method of practical analysis. Of course, as a method of making familiar with the words, it is open to the objection of uncertainty whether the pupil is following with his eye what is read.

(c) Sentence Reading.—The most approved method of simultaneous reading is that in which the teacher reads one or more sentences slowly and with slightly exaggerated emphasis and expression : the children to read when he has done. Here it is thought that the quantity read makes it unlikely that the children will repeat from memory without instant detection. But as sometimes they do—and must where much of the language is strange—a preliminary word by word reading is adopted as a preventative.

3. Cultivation of Intelligence.—Some of the most distinguished teachers have held that the best mode of enabling a learner to seize and retain words is to cultivate his intelligence. Wood and Pillans would have this done in connection with reading. A reading lesson was never thought to be completed until a thorough exposition of its words, phrases, and matter, had been given. Such a lesson was to be a "vehicle for imparting all kinds of information." In addition to this exercise, Stow advocated a daily "secular lesson," as he termed it ; by which, partly through the intercommunication between teacher and scholar, and partly by "picturing out" words daily, the learner would become acquainted with words, which when met with in the reading lesson would be no longer strangers. But whatever the mode, the aim was the same, that of making the scholar so intelligent that he would have no difficulty in mastering what was new.

II. Faults in Reading in the Junior Classes, and how to treat them.—We must first ascertain the fault, then its source, and then the remedy.

**1. Mechanical Faults.** (a) **Indistinctness.**—This is a fault often prevalent in the lower stages. This may be traced to timidity, to bad example, to feebleness or defects in the organs of speech, or to carelessness. In the first case, the child needs encouragement; in the others, that which is wanted is to establish as the rule of the class slow and forcible utterance. The motto “Take care of the consonants, the vowels will take care of themselves,” is of force here. No faults should be passed without correction. When cases occur of indistinct pronunciation of particular sounds, as *s*, *r*, or *h*, it is desirable to give daily exercises thereon, directing the child’s attention to yourself while uttering them.

(b) **Omission and Miscalling of Words.**—The words usually *omitted* are little ones, and when the omission occurs, are most frequently found after words with which the eye has not become familiar. The words *miscalled* have a general resemblance to the words named; as when “child’s features” is altered to “child’s feathers.” These faults have their source in inattention, and are the result of inaccurate observation. They are as often associated with a quick eye as with a slow one. In the former case the fault results from the eye not having dwelt long enough on the word to make it its own; in the latter, from inability to recognise the points of difference. In both cases, exercises which will compel and increase the power of attention will aid to remove the fault. Lessons on form, and in drawing, as tending to promote habits of observation, will be found valuable. Especially having the reading lesson written out daily, will be found useful.

**2. Pronunciation.**—The most troublesome class of incorrect pronunciations are provincialisms; the substitution of one sound for another, as *ü* for *ü*, and *vice versa*; the addition of a sound, as *idea-r*, and the omission of sounds, as of the aspirate. These faults partake of a mechanical character, belonging to the ear and habit as much as to defective intelligence. The best mode of dealing with them is to take up daily a systematic course of orthoëpy, such as that provided by the Manual of Pronunciation of the Scottish School Book Association. Other mispronunciations consist in an improper accentuation. This is a fault, sometimes of habit, generally of ignorance. Its source is to be sought in the difference between

the language of books and that of the common people. Much of this language is strange to the ear, and hence is so to their intelligence. Its pronunciation is often picked up, not from correct speakers or readers, but from others ignorant as themselves ; or with nothing but analogy to guide them, is as often fixed by themselves. The cure is with the teacher, who alone is to blame if there exists much incorrectness in his first class. The teacher should take means to secure the accuracy of his own pronunciation and that of his subordinates. An aid to this would be to mark the quantities and accents in the "Teacher's Lesson Book,"—the doing so being a part of the preparation of the reading lesson required from his apprentices. Once or twice weekly the middle and upper classes should read columns of words classified according to their quantities and accent, as in the "Manual of English Pronunciation." Words whose pronunciation is found difficult to acquire should be presented syllabically, each syllable being repeated in a full, slow tone till the effort is successful. As many of the faults of this class arise out of the newness of the language, its correct pronunciation will be more likely to stay in the memory when along with it is carefully conveyed an intelligence of the import of the word. Of course, every instance of mispronunciation coming under the teacher's observation must be corrected.

3. **Reading without giving the Sense.**—This is a very common fault, not confined to schools for the poor.

(a) **Early Habit.**—It may be traced, in many instances, to early practice. It is too often the custom, in the first stage, to permit merely mechanical reading, whence arises the habit of the eye at a later period passing over a page without the mind taking in the sense. The remedy is to take pains in the very lowest classes to connect meaning with the words read, and to get the children to read as if they knew the meaning and wished to convey it ; but that they may do this, it is necessary that the meaning of what they read should never be beyond their ability to comprehend, and should be of a character to interest them.

(b) **Language and Style.**—These, at a later period, present other obstacles to reading with intelligence. The former must be explained by familiar illustration, not

only the words separately, but in their connection with the sense of the passage. A capital test of a child's knowledge of a word is its ability to frame a sentence including it; and equally good as a test of its knowledge of a passage is its ability to render it in other words. The difficulty of the style can be mastered only by a careful analysis. "Reading well," says Mr. Lingen, "depends principally upon an intelligent analysis of the several parts of every sentence; upon the distinction of subject and predicate, of principal and accessory clauses; and generally upon a knowledge of the relation of each word, in sense and construction, to the rest." A chief object of the teacher should be to enable his children thus to analyze and understand what they read, and a part of every day ought to be devoted to this purpose, as a lesson in the art of reading, *as such*.

(c) **Subject Matter.**—The matter of many of the books, especially those of the higher standards, is often an obstacle to reading with correct emphasis and intelligent expression. It is often beyond the power of children to sympathize with its feeling and purpose; hence, how is it possible that it can be read well, when one of the essential conditions cannot be complied with? Sometimes, when there is no difficulty in apprehending the import of a single sentence, there is a weakness of power to grasp the subject as a whole, or to gain an intelligent conception of the relation of its parts. Yet this is an essential condition to reading so as to convey the sense. As a means of securing it, the teacher should employ his best energies on the analysis and elucidation of the lesson as a whole. He should endeavour to trace out before his class the thread of the lesson, and should carefully illustrate the connection between each sentence and the general subject. It will aid the pupil if he is encouraged to read all the sentences which to him appear to be more immediately connected, pointing out to him, of course, any error into which he falls. It is also essential that he should frequently read one or more paragraphs together.

(d) **Instruction and Example.**—But while the most effectual cure of reading without intelligent expression is to be sought in the intelligence of what is read, yet some aids may be given by precept, example, and practice.

The pupils should be directed to read so as to convey the sense. The teacher should daily read as their example. Much individual practice should be secured,—if possible in a quiet room, or at least out of the reach of disturbing sounds. Considerable advantage in securing distinctness and emphasis may be obtained from simultaneous reading, if in imitation of the teacher's model.

**4. Faults of Manner.**—Often associated with fluency of expression, and a fair apprehension of the import of what is read, are the faults of a rapid, boisterous, pompous or inflated, singing or monotonous style. Such faults of manner may often be overcome by a little generous ridicule, by which children are easily influenced. They may generally be prevented by establishing a few plain and easy rules, from which is allowed no deviation, reading to be slow, but not drawling; reading to be distinct, but not loud; reading to be impressive, but not affected.

### Section III.—Course of Lessons in Junior Classes.

**I. Classes Reading Easy Narrative. 1. Books.**—As the success of the teacher in promoting the progress of his pupils depends, to a great extent, on the books in use, care must be employed in their selection. At this stage it must be determined partly by the learner's acquaintance with words, and partly by the matter. It must not be forgotten that a child's vocabulary is limited, or that his progress is most likely to be quick when his early lessons contain chiefly words with which he is familiar. Still somewhat may now be permitted towards increasing his vocabulary, and this will follow if his books contain words in current use, which he has opportunities to hear. The subject matter of books at this stage should be of a kind to interest the learner. Fables, stories, anecdotes of animals, and simple poetry, will be found enticing. Dry "useful knowledge" compendiums, and still drier moral sentences, are to be eschewed. A variety of books, at this and every subsequent stage, is an advantage, as tending to give the learner that command of words which at length enables him to read any book with ease.

**2. Practice.**—When a lesson has been appointed, the first object is to make the children familiar with the words, so that they may read with ease, distinctness, and

accuracy. (a) *The Reading.* Sentences having been read, let the teacher read, and then have them read by one of the children. The same course to be pursued to the end. Let the lesson then be read by children selected by the teacher, each reader taking two or more sentences at the discretion of the teacher, the others correcting when necessary. (b) *The Methods.* These relate either to attention, unknown words, or inaccuracies. Inattention may be prevented by lively teaching, by challenging on the first symptom, and by throwing the detection and correction of mistakes on the class. Words unknown to any in the class, and inaccuracies of pronunciation, must be dealt with by phonic analysis, by syllabifying on the black-board, by the teacher calling attention to himself when pronouncing the words, and by practising the class in the correction of common defects.

3. **Exposition.**—In a subsequent lesson, the same piece may be taken for exposition and practice in reading with intelligent expression. The teacher may begin by questioning, to ascertain how much the class understand of the lesson, what ideas it has awakened, and what they have learnt. The books being opened, the teacher might ask for the meaning of the important words in the first sentence, and for the sense of the sentence, using such illustrations as he may find necessary. One of the children might then be directed to read the sentence so as to give the sense, by attending to the emphasis and pauses. The teacher to follow this by his own reading, if not satisfactory. This course to be pursued throughout the lesson. Sentences may next be grouped according to their meaning, and rendered with just expression and distinctness. During this the teacher to close his book, and occasionally to cause the class to do the same. If there is time, one or two to read a paragraph, or the whole lesson.

4. **Reproduction.**—This might be followed by an exercise in writing on some points suggested by the lesson,—as lists of words of like endings, or of words of like meaning, or the lesson might be written from dictation.

**II. Classes Reading Advanced Narrative.**—It must be remembered that the great difficulty as children advance is found in those from the illiterate classes. This difficulty will be lessened if the books are interesting, and

will to a great extent disappear if collective lessons are given, and if all reading lessons are made the basis of exposition, and of instruction in language.

1. **Practice.**—The lesson must be mastered so as to be read with ease and fluency. Bearing in mind the importance of training the learner to "self-help," yet his difficulties at this stage are such as to make it advisable to give him some aid. This may be effectively done by writing, as a preliminary step, the new words on the black-board, syllabifying them, pointing out anything peculiar in them, and giving their current import. The lesson might then be read by children indicated by the teacher, he himself reading occasionally, and keeping up vigorous attention by challenging and mutual correction. A few minutes at the close would be profitably spent on oral spelling.

2. **Exposition.**—When the lesson presents no further mechanical difficulty, provision should be made to open it up to the intelligence of the learner. To this end the class should be examined as to their own apprehension of its import, every occasion being seized in teaching to give children the opportunity of showing their previous knowledge, and of expressing their thoughts. The lesson must also be thoroughly analyzed, and every difficulty, whether of word, sentence, or subject, elucidated.

3. **Significant Reading.**—When a lesson is thoroughly comprehended, the opportunity exists for a lesson in the art of reading as such. Simultaneous reading, the teacher's exemplar reading, and individual reading of groups of sentences and paragraphs, are the means to be employed, the teacher and class giving attention to everything essential to reading with intelligent expression. The lesson should not be considered at an end until an abstract of it has been written or a dictation lesson founded on it.

#### Section IV.—Reading in Senior Classes.

I. **Qualities of Good Reading.**—Good reading involves a very complex process, and is consequently for children a very difficult attainment. No one can read well what he does not understand; hence a prime condition is a thorough knowledge of the language, style, and subject. Good reading requires right pauses, accents, and emphases; and these depend on the ability to analyze each sentence

into its principal, subordinate, and accessory parts. The eye and the mind have to run on in advance of the voice to gather up the meaning, and to ascertain the connection of what is coming, in order to the right expression of what is now being uttered. The entire line of thought must be kept before the eye ; and the spirit of the author must be seized in order to give vivacity and reality to what is read. To these may be added as essential qualities, correct pronunciation, including purity and distinctness of utterance, and the right placing of the accent ; deliberateness ; fluency ; and right pitch of voice. Good reading is the result of practice and intelligence. Little can be done by rules, such as those in works on elocution. These generally produce an artificial style, whereas reading, to be good, must be perfectly natural. A rule often given is, "Read as you speak." If this means any more than read in a natural manner, we say that with children it is impossible, because of the difference between the style and mode of thought of the author and their own. Rules relating to inflections of the voice, or to its tone, generally prevent good reading by diverting attention from the matter read. A safe rule is, "Fix your mind on the meaning, and endeavour fully to express it." Pains should be taken to excite ambition to excel as a reader. Good reading being thus a thing of growth, the teacher should see that the learner's progress is rightly directed towards it.

**II. Individual and Simultaneous Practice.**—In the senior classes there should be a judicious mixture of individual practice with simultaneous reading.

**1. Individual Reading.**—This is necessary to give the teacher the knowledge of each pupil's defects, and so have a proper groundwork for the instruction of the class. It requires from the reader independent effort in searching for the meaning of what he reads, and in expressing it ; it accustoms him to meet difficulties, and places him in a better position to receive assistance ; and it gives the opportunity for the cultivation of individual taste and intelligence.

**2. Simultaneous Reading.**—In the early stages, and while a lesson is unknown in its signs, the individual method is the only sure way of securing that each learner looks at the words ; simultaneous reading, ere the eye can follow the words, tending to make him depend on his ear

rather than on his eye ; for as he is ignorant of many words, he cannot always be certain that the word at which he looks is the word he repeats ; hence he repeats from memory, or catches up what others say. Simultaneous reading, where the eye recognises the words, is useful. It supplies continuous reading to the whole class, thus aiding to give that command of the organs of voice without which reading cannot be fluent. It aids distinctness by the effort which each has to make to keep the same pace as his fellows, and by the encouragement to speak out when sustained by the voices of others. It promotes a uniform rate of reading, acting as a stimulus to the very slow, and a check on the quick. It improves the tone and style, if properly combined with individual reading ; otherwise it produces an artificial style, because the pauses are longer than in individual reading. Simultaneous reading must be on the model of the teacher's. It is not an easy task to obtain it. Often that which is so called is a mere jumble of sounds, and for the special purpose in view a mere waste of time. To obtain good results from the practice the teacher must invariably precede the class, and he must have sentences read again and again until the tone and emphasis are rightly given.

**III. General Course in Senior Classes.**—1. The distinguishing feature should be to throw as much of the work upon the scholars as possible. Care also should be taken to give them opportunities of reproducing and applying previous instruction. Regard must also be had to the fact that assistance is more valued and more efficient after independent effort. The lesson then, as a first stage, is to be prepared at home, or to be read by the children in drafts, in rotation, or as indicated. 2. Two drafts being united into a class, the pupil teacher in charge of the section to which the class belongs should give the meaning of the most difficult words, and, where it will aid the meaning, their derivation as well. This will be found a valuable preparation to him to deal with one of the most important of school subjects. 3. The classes forming a section, when engaged on the same lesson, should next pass to the gallery or class-room for examination, verbal analysis and illustration, and supplementary instruction by the principal teacher. This should be followed by simultaneous and individual reading, the teacher setting

the example in tone, emphasis, and expression. This might be followed by individuals selected by the teacher reading groups of sentences and paragraphs, under criticism of the teacher and children, in order to a correct, intelligent, and impressive style. The criticism to be directed, not merely to mechanical faults, or faults of manner, but to success in rendering the sense. 4. The lesson ought to be reproduced either as an abstract or by dictation, the former as an exercise in composition, the latter to ascertain whether the *eye* has been properly employed during the previous processes.

### CHAPTER III.

#### READING—EXPOSITION.

##### Section I.—Ordinary Reading Lesson.

**I. Examination.**—A child's first claim is that it be taught to read, then that it be taught to read with profit. It must read with attention. It must be taught to hold what it reads in mind ; and nothing will enable it to do this so well as exacting from it an account of what it has read. This may be done in two ways,—by getting in the child's own language the results of its reading, and by having it rendered as nearly as possible in the words of the book. The best thing is to combine the two. For if the first only is sought, the children get into a loose style of reading : and if the latter only, it degenerates into mere verbal memory. The union of the two produces a habit of attention. But the learner must not only read with attention, but with intelligence. This must be sought because it is essential to good reading ; it is the only way to invest reading with a permanent interest ; and it is the best way to secure rapid progress.

The examination on each paragraph should elicit what they remember. The answers being given in the words of the book will open the way to test the intelligence of their meaning as fixed by the context, and how far the sentiments they convey are understood. Other questions would bring out the matter of former lessons which this

lesson has suggested, or any other collateral knowledge ; they would be put for the purpose of testing and stimulating the habit of thinking while reading. The whole purpose of the examination should be to train to habits of attention and thought ; to gather what the lesson has given and suggested to the children ; and to discover those points that are obscure, or not at all understood, for a basis of exposition.

II. **Exposition.**—For this there should be careful preparation. Few things so completely test teaching power as does the exposition of reading lessons. The exposition should deal with words, allusions, figures, sentiments, and with the general purport of the lesson. Words must be dealt with so as to bring out their import as fixed by the context. In lessons designed to give instruction in a special topic, as when the object sought is to convey the facts and teachings of history, this special import is sufficient ; but where the object is the cultivation of general intelligence, in connection with a knowledge of language, much more is required. The general signification of the term, varying applications of the same word —*e.g.*, band,—synonymous expressions, and antithetical terms should be asked for or given. Allusions must be made clear by statement and explanation, and figures must be unfolded by appropriate illustrations. The sentiments must be fully illustrated, and any information necessary to elucidate them given. All this is to be preparatory to enabling the learner to go over, gather out, and bind together all that constitutes the lesson as a whole. In doing this, the import of each sentence must be obtained by an analysis, which will bring out clearly every distinct notion. Then the relation of the sentences to each other, and the bearing of each on the development of the subject, should be made clear, and additional information given, or illustrations employed, if necessary, to enable them to grasp the subject as a whole. As the learner advances in power, a higher standard than this may be set. Such a one as would be found in adding, to what has been a criticism on language, style, illustrations, and matter, such criticism as would make apparent sources of obscurity, doubtfulness of meaning, weakness of expression, illogical arrangement, false reasoning, or misstatements. Lessons such as these coming regularly into school work at not

distant intervals, could not fail to promote the intelligence of the pupils, as well as to teach them "how to instruct themselves ; and that, after all, is the great end of school work." It ought to be remembered that the exposition of a reading lesson is not to enable the learner to read that lesson well, but so to cultivate his intelligence as to empower him to read any lesson well.

**III. Preparation for Exposition.**—Teaching in connection with a prepared text differs from other teaching in having first to elucidate the language, and to gather the knowledge of the subject-matter through that means. It also differs, by confining the teacher in his elucidation of the subject to the portion presented in the text, and to the order in which it is found there. The subject, the matter, and the order of the lesson being given, the preparation must differ materially from those employed for collective teaching.

The exposition of a reading lesson is intended to promote progress in the art of reading. Two objects are to be kept in view. One is to extend the pupil's knowledge of language by enlarging his stock of words, and making them luminous to his mind ; the other is to enable him to grasp the ideas in his books, so as to render them with intelligence and feeling.

**1. The Text.**—The chief thing in the reading lesson, and therefore in the notes, is to "*vivify the text.*" This is to be done by explaining all the terms and allusions as they successively turn up, and showing their connection with the general subject of the lesson ; by clearing up all difficulties of style, and by analyzing sentences of peculiar construction. To this purpose the first division of the notes should be appropriated. Each term or allusion should be taken up in the order in which it occurs, with the illustration or explanation it is intended to give, with brief references to other instances and analogies. Where words occur out of their ordinary use, or some derivation turns up which throws light on a class of words, or some important allusion is made, every available source should be laid under contribution for illustrations and examples. Terms that have been explained in former lessons need simply to be indicated, for the purpose of giving the children an opportunity of reproducing their previous knowledge.

2. **The Subject.**—The next point is to see what there is in the subject of the lesson, or in the ideas presented, that would be likely to prove a hindrance, not being understood, to reading with intelligence. This may form the next division of the notes. Here care must be taken not to admit irrelevant matter, nor to be led away by association, nor by any favourite or familiar topic. It will rarely be necessary to introduce new matter; the text clearly brought out, and illustrated with its natural associations, will quite occupy the allotted time. Nothing should be allowed admission into the lesson which has not a tendency to improve the art of reading.

### Section II.—Class Subjects.

When children have made some progress in the art of reading, and have gained power to gather out the sense, they should spend some of their time in reading books with the aim of furnishing their minds as well as disciplining them. Two kinds of books may be used for this purpose; one, for a lesson in language and thought, another for the acquisition of special knowledge, as history.

1. **Lesson in Language.**—This is a lesson in which a good English author is to be treated as a classic one in a superior school. “The best thing,” says Markby, “a master can do for his boys is to choose some book really worth their reading, make himself master of it beforehand, and while he goes through it in his class-room, explain and illustrate it from all available sources. . . . By so doing he will teach his boys how to instruct themselves,—and that, after all, is the great end of school work.”

The precise import of each sentence should first be obtained. By analyzing it so as to bring out clearly every distinct idea. By examining the force of every word in the sentence, its relations to the others, and its bearing on the general subject. By explaining the word or words which form the pivot of the sentence, or which materially modify its meaning; tracing out the meaning of each in its present connection; selecting other instances of a similar use, and showing the other applications of which it is capable. By taking up everything in the structure and import of terms that tends to illustrate the formation and use of language.

The language should be fully criticised, and beauties and defects marked out. Where obscurity exists, the sense dubious, or the expression weak, its cause should be sought in the arrangement, the language, or the illustration, and a note should be made to have the author's meaning rendered in better style or more precise language. When literary, historical, or other allusions occur, or figures are introduced, they should be fully elucidated, their fitness for the author's purpose examined, and how far they illustrate or confirm his point shown.

**2. Special Subjects.**—The preparation of the lesson is the first thing. In senior classes this may be done at home, or in silent reading in school with the aid of a dictionary and an atlas. In junior classes, one of two modes may be profitably used in assisting the preparation. "A teacher with great aptitude for collective teaching may anticipate the class reading, by lessons dealing with the difficulties found in the portion to be read. Another, not so apt, may find it more within his power to give needed explanations while the lesson is being read." In this case he must bear in mind that his class must have sufficient time for the preparation of the lesson.

When the lesson is prepared the next step is to test the completeness and intelligence of the preparation. In doing this each part should be exhaustively treated. Nothing should escape attention. The children should learn that thorough and intelligent application is quite necessary in such work. When the teacher is thoroughly satisfied that his class have made such preparation as will fit them for further instruction, he should address himself to the subject. All its terms and allusions should be carefully explained, and all the points in the portion read should be illustrated and amplified. If experiments are needed to make clear anything, the apparatus and material necessary should be at hand ; and there should be ready also any maps, diagrams, or specimens which may be needed.

### Section III.—Derivation of Words.

**1. What should be Done**—Few subjects in elementary instruction are so often abused as the derivation of words. The teaching is often mechanical—mere rote ; the result, a display of words without the knowledge of their

meaning. That there ought to be some teaching of it there can be no doubt, when we consider that no one can be said to have learnt English who is unacquainted with the sources of it. But it is not only valuable as showing the sources of the language, but in many cases in elucidating the meaning of the words ; although this is not so frequently the case as some teachers imagine, as the conventional use often widely varies from the primitive signification. To trace the present use of a term back to its original meaning, gathering thereby the history of the word, and the changes in opinion which it indicates, is as valuable as a mental discipline as it is interesting to those who are capable of it. Derivation has some claims on the teacher in the assistance it *sometimes* supplies to the correct spelling of words.

2. **How it should be Done.**—The method of teaching derivation which we would pursue differs somewhat from the ordinary practice. We would begin in the lower classes with simple words, and show that a whole word often enters into composition with other words, forming thus *compound words*, as *eye*, *eye-brow*, *eye-lash*, *eye-lid*. The next step would be to show that many common words had a bond of association in their form and signification, as *shade*, *shadow*, *shadowy*. Proceed to show, as occasion presented, that the addition of a prefix or affix alters the meaning of words, as *likely*, *unlikely*, *join*, *joiner*. Confining the lower classes to the above, and adopting the same plan in the higher when necessary, the next step would be to direct attention to words having a common part, as *porter*, *portable*, *import*, *export*, and *transport*; and show that though these words differ in their entire signification from each other, yet they contain *one* idea in common. The next step would be to make clear that this common element existed in another language, with that definite idea attached to it which we find to run through all its derivatives. These things being understood, when words occur in the reading lesson, the derivation of which would open up their meaning, it should be given, and other words from the same root required. The next step would be to explain a root, and to set the class to find out the derivatives, to be afterwards dictated as an exercise in spelling.

## CHAPTER IV.

### WRITING AND PENMANSHIP.

Writing is a species of reproduction. It consists in reproducing in ever-varying combinations, a few simple elements. It involves a mechanical, imitative, and mental element. It requires a thorough mastery of the hand, a cultivated eye, and a knowledge of those forms, combinations, and proportions, which constitute legibility and beauty. In ordinary writing, the mind determines, and the eye and hand execute, and this is to some extent the case during learning to write.

Writing should be begun at an early period in a child's school course. The period can scarcely be too soon ; for the faculty of imitation is strong in young children, their muscles are pliable, and the power of managing the hand more easily acquired. Writing, too, is an important instrument in all school work. It renders effective aid in the earlier stages of reading. It is an indispensable instrument in spelling. It furnishes the means by which to strengthen the memory, and to produce orderliness of mind.

I. **Early Exercises.**—First lessons should consist in drawing straight and curve lines on blackboards. A child handles chalk with more confidence than it does a pencil. But soon the slate must be introduced, and lessons in writing commenced. In some schools it is the practice to have all the letters, capital and small, acquired first. But it would be better, after a few of the simpler letters are mastered, to let the child write words. A word has a meaning for a child ; a letter or a stroke has none. Hence its interest is greater when writing words. When a word is mastered, another should be added, and so on until a sentence is formed, which also should be gradually enlarged, so as to make the same words a part of all its first lessons. The child's progress is much more rapid on this plan than by conducting the lessons as one would a course of penmanship, though it has been found successful even in first lessons in penmanship, and where the copy consisted of the gradual enlargement of the sentence,—God is good to all men, &c. The constant recurrence of the same

word, by giving the opportunity to correct previous defects, partly accounts for the success of the plan.

**II. Penmanship.** **1. Importance as a School Subject.**—To secure good penmanship, and to teach it with interest, a right estimate of its importance must be formed as a branch of school instruction. This may be obtained by considering it from a twofold point of view. (a) Its influence on the material prosperity of the school. Among the means of judging of a teacher and school, the copy-book holds a prominent, and with some parents the only place. It registers the amount of work for weeks together ; it exhibits the degree of attention given to this part of his work by the teacher ; it is an index to the nature of his discipline ; and it furnishes a test whereby to ascertain his habits of neatness and accuracy. Parents and others thus get to look on the copy-book as a mirror which faithfully reflects the character of both teacher and school. Hence the reputation of a school often grows out of the copy-books ; and where the reputation is high, there is generally no difficulty in filling its benches. (b) Its influence on the education in the school. It bears directly on the education of a child, by cultivating its eye, hand, and judgment ; by furnishing the means of forming habits of neatness, carefulness, and accuracy, and by suggesting ideas of beauty and taste.

**2. One Thing at a Time.**—Too many things must not be attempted at once. It appears to have been the practice of our predecessors, in their anxiety to strengthen the memory, to give much theory before practice. The memory was thus burdened, and impediments thrown in the way of progress. Thus, in grammar, a book of rules was learnt relating to classes and inflections of words, and to syntax, before the pupil was introduced to the sentence in its integrity, and taught to resolve it into its essential parts, and these into their elements. So with penmanship. It has been customary here to give a score of directions on position, holding the pen, forms of letters, &c., every one of which is good, and must be attended to, but which the unhappy wight, finding impossible to remember all at once, neglects altogether. The foundation of bad habits in penmanship is laid when too many things are given to be attended to at once. One thing must be executed accurately before another is attempted. In the

elementary portions of any subject, and especially of penmanship, the old proverb holds good,—“More haste, worse speed.” The course we recommend may seem slow, but it is sure, and in the end will be found the quickest. If every step is learnt perfectly, there will be nothing to unlearn at a subsequent period, no bad habits to overcome. For instance, it is no easy matter for a child to discipline its muscles until they execute any movement with which they are entrusted. When this difficulty is not met at the outset, bad habits are formed, which embarrass the child’s progress. Now the practice of attending to one thing at a time, and keeping at it till it is done well, is the surest safeguard against such obstacles to progress.

3. **Principles and Methods.** (a) **Management of Hand and Pen.**—Early success in writing, and to a great extent success at all, depends on the early mastery of the hand and pen. A knowledge of elementary forms and their combinations may be obtained, and the eye trained to appreciate beauty of form; but until the hand is disciplined and under the control of the will, success must not be expected. Attention to form and proportion must yield at first to what relates to position and to the command of the hand and pen. It has been already shown that the mastery of mechanical movements depends on attention being directed to the mode of operation in the first place, rather than to the intended effect. Exercises on slate may precede the use of the pen. By means of these the hand may be disciplined with greater ease than with the pen, because the child has more confidence; but they will not give the mastery of the pen, which from its flexibility, and being the channel of a fluid, requires more dexterity in its management than a pencil. On introducing the pen, therefore, care must be taken to exercise in its use until it can be handled with tolerable ease. The following points will need special attention:—The children must sit erect, with their bodies slightly inclined to the left, and the left arm on the desk by the side. The copy-book should be parallel with the edge of the desk—not too near, or the fingers will be cramped; not too far, or the children must lean. The pen ought to be placed at the side of the big finger, and from half an inch to an inch from the nib, according to the age of the children; its shaft ought to be level with the knuckle of the forefinger,

and the pen so held as to allow the top of the nib to be seen, by which means jagged strokes are avoided.

(b) **Imitation.**—Writing, in its stage of acquisition, is an imitation of form, being in fact a species of drawing; hence, next to the discipline of the hand, and as an aid thereto, it requires the cultivation of the eye. That the pupil may imitate correctly, he must be taught to observe accurately. He must be instructed in form, that he may see accurately, appreciate beauty of form, and readily detect the errors that he makes. Hence drawing should accompany writing, as this cultivates the eye better than writing does: this does so because “there is a greater variety of forms, they are more marked, more distinct from one another, and more sharply defined; and when the eye has been trained to observe and distinguish in drawing, it applies its habits with greater advantage in writing.” Bringing a cultivated eye to his task, the pupil’s progress is more rapid, because more intelligent; he has a better conception of what he has to produce, and can perceive more clearly where his efforts fail. Good models, carefully graduated, must be supplied, and the lesson must proceed under judicious superintendence. His imitation of his model must be faithful, as this is the only means of his forming the habit of producing good letters; but unless he is carefully watched, and his writing constantly inspected, he will copy his own writing, or reproduce from memory.

(c) **Instruction.**—To have all the advantages imitation can yield, it is not enough to have a series of graduated lessons, and to place before the pupil a model to imitate; he must receive such instruction as will make his imitation intelligent, and will enable him to determine how far his imitation is accurate. Two ways of doing this present themselves,—either before a class commences its exercises on a new letter, to have the proportions and points of combination made clear; or, after the first line has been written, to take out the distorted forms, write them on the black-board alongside of a perfect letter, show where each departs from the model, and point out the cause and remedy. For the latter plan it may be urged that the children are more interested and more likely to profit from the instruction after the attempt than when difficulties are anticipated. Practically it matters little which plan

is followed. Both may be used with advantage. Before a child is set to form any new letter, that which he has to do might be made clear; that is, the proportions and points of combination explained and illustrated; how it is to be done shown; the defects likely to arise pointed out; and the way to avoid them indicated; then, during practice, the imperfect forms found in its exercise may be written on the black-board and compared with a well-formed letter, and the cause and remedy given. Throughout, the teacher must keep in mind that he must give such instruction as will cultivate the eye to discern, and the hand to execute any form that is placed before the pupil, and that will give him power to determine for himself what constitutes beautiful and correct forms, and how to produce them. The child's eye needs to be cultivated before it can discern or appreciate the minute differences of form so essential to the production of a successful copy. The hand, of course, cannot execute what the eye does not perceive. It must also be remembered that, in ordinary practice, there is no model for imitation, and the hand then either executes mechanically the forms to which it has been accustomed, or else executes what the mind determines. Something more is wanted than simple imitation. Instruction must be given which will not only impress the forms on the eye, but which will enable the mind to determine at all times what is necessary to the production of perfect letters, and to point out the defects that occur, and how in any given case they might be remedied.

(d) **Mechanical Aids.**—Attention must be given to the position of the child in regard to the desk, light, and ink. The child must sit comfortably, the light fall from the left, the ink placed so that he may not need to change his posture. The materials used should be good, such as will facilitate his progress. His practice at a lesson must be sufficient, but not prolonged to fatigue. Two short lessons daily would be attended with more benefit than the same time spent on one practice. Aid to the pupil, like that furnished by Locke's method of tracing, or Mulhauser's method of construction, must be given with caution. These means, injudiciously used, defeat their purpose, retard the pupil, and lead to a cramped style; they are a hindrance to freedom, originality, boldness.

and progress. They are useful only while the pupil is acquiring the mastery of his hand and pen ; he can then give his attention chiefly to that. Oblique lines, as in Mulhaüser's system, may be used with letters containing simple elements, as *u* ; tracing, as in Locke's system, in the more difficult letters ; and the upper and lower parallel lines, so long as the eye needs them ; but when the mastery of the hand and pen is acquired, such aids should be dispensed with, because a hindrance to progress.

4. *Course of Instruction.* (a) *Text-hand.*—The learner has to acquire freedom of hand, command of the pen, and to write legibly. His first course is in text-hand ; but the term is applied to writing very much differing in size, and it becomes necessary to fix it. For if the hand has at first too large a space to pass over, the learner finds it more difficult to master the movement, and if the space is too small facility is not obtained. The distance between the lines of the first exercises should not exceed  $\frac{1}{8}$  of an inch ; then when some power has been gained, lines half an inch apart may be used.

The success of the teacher will depend on his having a system and keeping to it. He should have rules for size, form, letters and words. (1) His rules on *size* should secure uniformity of construction. For example, let the letter *o* fix the size of the letters. Its width might be half its height. Assuming this and using it as the unit of measurement, it may be said to occupy one space. Then all letters of the same width would be spoken of as letters of one space, *c* and *e* a space and a half, *u* and *a* two spaces and so on. Then taking the height of the down stroke in *i* as the unit of measurement of length, *t* would be one length and a half, *b*, *d*, *h*, *k*, and *l* two lengths, and so on. (2.) Rules on *form* should secure that the strokes are uniform in slope, height, and thickness ; that the upper and lower turns are equal in size, and that they are correct, neither too sharp nor too round, and that the joinings are on a uniform plan. (3.) The *letters* should be taught in the order of simplicity, and *words* should be introduced on a graduated scheme. (4.) *Capitals* should be presented on the same principle of beginning with the simpler elements, and exercising until each is mastered. (5.) As the pupil's progress must be affected by the adaptation of his lessons to his wants, copies set by hand

are preferable to engraved specimens. For, not to urge that the pupil has more encouragement to imitate carefully what is written, copies so set furnish the means to supply the exact exercise needed. A teacher should have a large stock written out and pasted on millboard.

(b) **Small-hand.**—Small-hand should not be deferred until the preceding course is finished ; it should alternate with that from an early period, for the sooner it is at command, the more profit will there be to the work of the school. In conducting these lessons the teachers must carefully hold in view the qualities of good writing—legibility, beauty, and rapidity. Legibility is affected by slope, simplicity, proportion, and uniformity ; beauty depends on the base assumed, whether angular, circular, or elliptical ; and rapidity depends chiefly on the same qualities as legibility and beauty. Angular writing is at once the least legible and the least beautiful, and has nothing to recommend it save the rapidity with which it may be scratched. Circular writing is the most legible, though not so beautiful nor so rapid as the elliptical.

That which takes the ellipse for its base is the most beautiful, and when nearly upright is quite legible ; the more sloped it is, the less legible it is. A little slope makes it easier for the hand to produce, and thus rapidity is promoted. The style, then, that has the ellipse for its base with a slope not much removed from the upright, combines the three requisite qualities, and all that the teacher need to insist on beside is freedom from flourishes and ornamentation, that the stems and loops of one line do not touch those of the others, and that the joinings are at the top or bottom according to the letter formed, and not in the middle of the down stroke.

(c) **Current-hand.**—When children are good writers of *schoolboy* hand, they should be introduced to current-hand. The first exercise is to write words and then sentences without lifting the pen ; for this purpose the old copy-books would be found serviceable. Writing abstracts of lessons will be found another valuable aid ; as will writing in books not ruled, which tends to secure straight lines, and to impart confidence.

(d) **Caligraphy.**—Caligraphy is the final stage in the course, not reached by many in elementary schools. It has many attractions for boys, and might be held out as a

reward to progress. It tends to improve the taste, and is an undoubted culture of the eye and hand.

5. **Points of Attention at Writing Time.** (a) **Neatness and Legibility.**—Neatness and legibility must be exacted from all. Beauty of penmanship must not be expected from all. Some do not possess the physical qualities necessary,—a good eye and firmness of nerve. Others are deficient in conception, and are weak in taste and beauty; but all are capable of neatness,—all may write legibly,—all may avoid scribble,—all can keep their books clean. Fine writing is in the power of the few,—readable writing is in the power of all. A neat book and a legible hand, the effort to do well, painstaking, ought always to receive their meed of praise. When visitors come, not only should beautiful penmanship be shown, but especial attention ought to be drawn to the neat, the legible, and the clean.

(b) **Thorough Inspection.**—To secure attention to principles during practice, there must be thorough inspection and criticism of defects. Inspection is essential. A writing class should never be without a teacher capable of detecting at a glance any and every defect in a line, and the slightest deviation in position, and in the management of the hand and pen. To ensure thorough inspection, and to remove the temptation to hurry on, no more than one line ought to be written before being shown. To call attention to defects, a slight pencil-mark should be put under the letter, taking care not to deface the appearance of the book. This is best done out of school-hours, and should be joined to the practice of setting the same copy till the faults disappear.

(c) **Careful Criticism.**—The defects to be marked belong to neatness, legibility, form, proportion, symmetry, and spelling; according to Mr. Abbott, the following are the defects most likely to occur:—“Strokes rough, curve wrong, bad termination, too slanting and the reverse, too broad and the reverse, not parallel, form of the letter bad, large stroke made too fine and the reverse, too tall or too short, stems not straight.” The defects that occur are either individual or general; in the former case it is sufficient to mark the defective letter, and to leave the pupil to discover the defect and to remedy it; but in the case of defects prevailing through a class, the cause must

be sought, which will generally be inefficient instruction in the theory. The opportunity must be seized to make principles clear. Writing the letter in which the defects occur on the black-board, and taking the different errors and putting them also on the black-board, but in a somewhat exaggerated form, proceed to compare each letter with the perfect letter, get out the exact defect, and show how it must be remedied.

(d) **Discipline during Writing.**—The objects which discipline must secure in this lesson are neatness, accuracy, order, and application. These objects are not to be obtained by the use of ordinary class devices, like those employed in teaching reading or arithmetic. The management of a writing class requires, in a smaller sphere, the same principles and plans as those by which a school is governed. We are limited in expedients to influence individuals, and must employ means which tell most effectually on the mass. In fact, how to influence and guide the whole is the problem to be solved. Success greatly depends on the amount of interest felt in this question, and on the amount of invention displayed in working it out. Amongst other plans there must be one which will secure quiet and orderly taking of positions at the desks, without confusion and without interruption of other classes. There should be arrangements to prevent loss of time at the commencement, such as placing the copy-books belonging to each desk at the end, ready to be passed, and having the pens distributed along the desk by a monitor. There should be a system of signs to secure simultaneous movements at the commencement and at the close of the lesson. Means should be taken to excite interest and promote progress, such as all writing from the same copy, all writing a line at the same time, taking the best book and comparing others with it, and giving to each page a mark indicating the teacher's opinion of it. Besides these things the children should be limited in the amount to be written, the temptation to hurry on must be removed, and the impression must be made that care and painstaking, and not quantity, give skill. Silence ought to be imposed, as well for the sake of the classes in the vicinity, whose lessons may demand it, as for the sake of forming the habit of silent application.

## CHAPTER V.

## SPELLING AND WRITTEN EXERCISES.

## Section I.—How Spelling should be Taught.

I. **Value of Oral Spelling.**—Spelling is the right formation of words with their proper letters. Spelling is either oral or written. Oral spelling does not give the ability to write words correctly, but it must not from this fact be deemed a useless exercise. Long used as a basis of learning to read, and still clung to by many, notwithstanding the discovery of a better method, there must be something in it. It has already been shown that its special claim of giving the learner the powers of the letters, so that he may pronounce new words for himself, cannot be allowed. What it did do was to make words familiar to the ear that otherwise would have been altogether strange, and sufficiently distinguishable by the eye to enable the learner to recognise them again when met with in his reading lessons. Other reasons may be assigned for the tenacity with which the old practice of setting spelling lessons has been clung to. It found favour with parents as furnishing some school work at home. And it found favour with teachers, as giving the only means with the younger children, or with the children of the very poor, of forming those habits of attention, application, perseverance and retention which are the characteristic features of a system of tasks.

II. **Principle on which Spelling should be Taught.**—“The old adage, ‘Eyes are better than ears,’ nowhere holds good with greater force than in learning to spell.” Familiarity with words as written, such as will give the knowledge of all the letters and their proper position, is necessary to the power of writing them correctly. Such familiarity is obtained only from frequently seeing or writing them. The only way to produce words accurately is to make them familiar to the eye ; hence the well-known fact that persons who read much, as compositors, or write much, as copyists, invariably spell correctly ; hence also the common practice, when people are in doubt

between two forms of words, to write them both, when the eye instantly decides on the right one.

Three things follow from the principle that correct spelling is the result of familiarity with written words. The first is, that so extensive a vocabulary as the English cannot be mastered in elementary schools, and hence we cannot make perfect spellers therein. The second is, that words already familiar in meaning, or to the ear, or found in the school books, may by proper methods be made familiar to the eye, so as to be accurately produced when required. The third is, that much of our success must be obtained by other than direct means of teaching to spell. Thus, much practice in reading ; directing attention to words peculiar in structure, or types of a class, while so engaged ; the verbal examination founded on the reading lesson, and the writing an abstract at its close, are all helps in fixing the forms on the eye. Supplying the school library with interesting books will render material aid.

**III. Means by which to teach Spelling.** 1. **The Reading Lesson.**—Much reading is a certain way to secure correct spelling. Persons who do not spell correctly are at once deemed to have no literary pursuits, as that is a sure sign of deficient cultivation. The teacher should provide as much reading in school as possible. No class except the lowest should be confined to one book. A variety of lesson-books will be found helpful to both reading and spelling, as will also a good library. But at the time of reading, several things may be done to impress the forms of words on the eye. One is to take all the new words before reading, and by the aid of the black-board to analyze and explain them. Another is to direct attention during reading to anything peculiar in structure, or to anything likely to cause the eye to dwell a little with interest on a word. Another is to have the entire lesson spelt after the reading. This practice, when uniformly pursued, furnishes a motive for attention during the lesson. In the upper classes it may be sufficient to have the entire lesson spelt orally, and a part dictated ; but in the lower ones it is advisable to have the whole lesson copied on slates, and afterwards dictated. When during the reading words occur to which others are like, either in their endings or derivation, or which are the same in sound but

different in spelling, let them be sought from the class and written on the board by the teacher, or, which is better, by one of the pupils.

2. **Spelling-book.**—Objections against the use of spelling-books have been grounded on their structure. In the majority of them words were arranged in columns, with no other bond of association than the number of syllables—this being the slightest of all bonds—"abandon" offering no clue to "abatement." Thus many useless words were learnt, words never employed in ordinary composition. Words in common use received no more attention than words seldom employed. And many of the words being above his comprehension, the learner's memory was uselessly burdened.

A spelling-book constructed on a good principle, and used in a proper way, will be found an advantage to spelling. Several such books exist. The following are their features:—First we have all the monosyllables by easy gradation, and in a systematic way. These should be thoroughly mastered, because among them will be found the chief irregularities, and they are the most frequently recurring in composition. Then follow words of two or more syllables, arranged as far as possible in illustration of such principles or rules as may apply to them. Then come words grouped according to their relation to some special subject—a principle of association that has been found very effectual for its purpose, and one that admits of the reappearance of many words that had occurred in the former parts. These are followed by words exceptionally irregular, but claiming attention from being in common use.

To use the spelling-book to the best advantage a portion of time might be allotted daily to the reading a number of words, accompanied by such explanations as might be found necessary, and their use exemplified in sentences. The words should then be copied on slates or in books, and where the children are too poor to purchase the spelling-book, these should be taken home and the words learnt. Next day they should be written from memory, or, if pupils are too young for this, from dictation.

3. **Transcription.**—(a) The sooner the learner is introduced to copying words the better. Spelling correctly being of use only in writing, the scholar will earlier learn

its value if set to write soon. The act of copying is favourable to accuracy and to permanence of impression, for reproduction by the hand secures a more minute inspection, and demands a greater effort of retention. (b) Transcription is better suited as an instrument to teach spelling than dictation. It presents right forms to the eye, while a moderate degree of attention on the part of the learner, and due strictness on the part of the teacher, will ensure their being copied correctly. (c) Still, for transcription to do its work effectively, one or two things must receive attention. The words and matter copied must be understood. Merely writing words makes neither their meaning nor sound familiar, nor can ensure, without this, that they will be correctly produced at other times. Mistakes often occur in dictation, because the words are not understood. Hence copying from books should come in the lower classes after the lesson has been read and explained. In the more advanced classes it will be sufficient if it precedes the reading, or is a preparation for dictation. The learner must be taught to look carefully at each word before writing it, and to compare it with the book after doing so. No mistake should pass unrebuked. If errors appear, they proceed either from a too hasty glance or from negligence. Let the scholar understand that no lesson can be passed until written correctly, and for each fault let the penalty of writing the word a dozen times be exacted.

4. Special class-work.—It is advisable to appoint to each class a series of lessons, which should be so arranged as to warrant the hope that all will have learnt to spell what their books contain, by the time they reach the first class. It is also desirable that the special defects of each class should be kept, a list being made daily of all the errors in spelling. To these attention should be given once or twice weekly. This plan is very effectual; for where spelling is conducted in a systematic way, it is found that the same classes of faults are continually cropping up at the same stage.

(a) Infants' Classes.—(1) Simple sentences containing words of like endings, as: James will bend the wire and mend the fire. (2) Simple sentences containing easy words, especially the names and qualities of common objects, as: The tea is cool. (3) Pieces of simple poetry, copied, learned, and written from memory.

(b.) **Junior Classes.**—(1.) Sentences containing words of similar pronunciation but different in spelling and meaning, as: The wind blew the blue-bell away. (2.) Sentences containing words with silent letters, as: The dumb boy talks by signs. (3.) Words spelt and pronounced alike but different in meaning, and words spelt alike, but different in pronunciation and meaning, as: It was meet she should meet her cousin. His conduct will conduct him to ruin. (4.) Words in which the same vowel represents various sounds, as: Frank, fame, fare, calf, want, and many. (5.) Words in which the same vowel sound is represented in various ways, as: Gray, grey, faith, great, veil, weigh; pine, eye, bye, buy, by, smile, aisle, height, sight, lie. (6.) Selections of poetry.

(c.) **Senior Classes.**—(1.) Derivatives from a common root. (2.) Columns of anomalous words and words of peculiar difficulty. (3.) Selections of prose and poetry from memory.

### Section II.—Tests and Aids.

The value of the plans adopted in teaching spelling will be affected by the tests employed to ascertain the results. As a general rule the tests should be by writing, as then the mistake is palpable, and the correction obvious. The exercise becomes, too, an aid in impressing the correct forms on the eye.

1. **Oral Spelling.**—At the close of reading lessons, or prior to dictation, it is a good practice to spell orally either what has been read or what is to be dictated. If it is a uniform practice after reading, it acts slightly as a motive to attention. If previously to dictation, it makes apparent those words that are not known. Every word should be spelt, and not the longer ones only; in fact it is often found that long words are spelt correctly when short ones are not.

Advantage, too, may be taken of spelling by syllables. Doing so is a help to the memory in long words, is an aid to distinctness of pronunciation, and is useful when in writing syllables have to be divided.

2. **Dictation.** (a.) **Its Office.**—Dictation is an indirect method of teaching spelling, depending for its success on what precedes and accompanies it. Its office is to test the amount of attention with which spelling lessons

have been prepared. It is an admirable instrument for examining pupils in spelling, for testing their knowledge of the art, but it is not so valuable for teaching it. A child set down to write from dictation what he has not previously prepared—having nothing but the voice of the person dictating to guide him—of course makes mistakes, and thus learns to write incorrectly. The object should be to prevent, and not correct mistakes ; and dictation best secures this object when it is kept to its proper office of a test of due preparation.

(b) **The Dictation**—The children must know what they have to write. Indistinctness in some cases is a source of error and of loss of time. But distinct utterance and correct pronunciation will not ensure accuracy. Distinctness will not tell a lad whether he is to use a, ai, ei, ea, ay, or eigh in made, maid, great, vein, nay, neigh ; and correct pronunciation would not lead any one to spell cabbage correctly. If a child had to write “the air is soft,” the sound of air would not tell him whether a tune was praised or the atmosphere, or whether an uncomplimentary remark was not levelled against the head of a prospectively rich one. The teacher must of course speak slowly and distinctly ; but to ensure that each word is rightly caught, he should have each word pronounced, and in the lower classes spelt, before written. The exercise should be conducted so as to cultivate attention and strengthen the memory. With the younger children it may be necessary to dictate words singly, but they should be early accustomed to phrases, and the amount dictated should grow with the power to retain them.

(c) **The Quantity**.—The whole lesson should not be dictated before correcting mistakes. As dictation offers the opportunity of teaching other subjects there is a danger of its proper province being overlooked, and thus the quantity dictated rather than the amount corrected may come to be the primary consideration. Besides, it is difficult to fix such an amount as will leave time for examination and correction, and without these the exercise is positively injurious. A good plan is to dictate one or two sentences and then correct ; then proceed to one or two more.

(d) **Mistakes**.—The detection of every mistake with least loss of time is of the first importance. Careful

examination of each slate by the teacher is most likely to secure this, but it is open to the fatal objection that it occupies much time and leaves the class idle. In some schools monitors are appointed to examine the slates and to correct the mistakes. This, apart from the difficulty of getting properly qualified monitors, is objectionable, as yielding the monitors no adequate return for their long and irksome task, to which must be added the possibility of unfaithfulness. The plan of allowing the children to inspect each other's slates is open to serious objections, not the least of which is the distrust it seems to imply. Sometimes the children compare their slates with the lesson in the book, or written on the black-board, a plan which has the advantages of throwing the labour on the child, and of having the corrections made at the same time, all that is needed being a vigilant oversight, to see that it is faithfully done. A good method for a young teacher is to dictate a couple or so of sentences, and then to spell each word himself, the scholars to underline their mistakes. But the method which is most effective is for the teacher, if he can hold his class in hand, to pass along the desks while he dictates, underline mistakes, and copy them into a book.

(e) **Correction.**—The correction of mistakes should appeal to the eye, not to the ear. Pains should be taken to ascertain the cause of any common defect. For this purpose the word should be written on the black-board, and alongside of it the correct form; the two should be compared, and the cause of the mistake discovered. Often this will be a lesson on the structure of a class of words, and probably prevent similar mistakes afterwards. After this has been done, the whole class should write the word in its correct form, and then the words should be dictated afresh, and if any now have mistakes, they should be required to write the words three or six times, according to the degree of carelessness shown. Sometimes it may be well to direct the children themselves to write correctly the words they have underlined, this making them attentive while the words are being spelt. But, as a general thing, this is open to the objection that it appeals to the ear more than to the eye, and that it does not occupy the children who have spelt all correctly.

3. **Writing from Memory.**—This may be made a valuable aid to spelling. As soon as children are able to

write easy words, they might be accustomed to commit pieces of simple poetry to memory, to be reproduced as spelling exercises. These they should compare with the book, and correct their mistakes. The same practice is worth adopting as a test when history, grammar, or geography has to be got up. It furnishes a complete test to the thoroughness with which a lesson has been prepared, and also promotes a habit of accuracy, besides being an exercise in orthography. Of course the value of this, as a spelling exercise, consists in the carefulness with which mistakes are detected, and in the means taken to ensure their correction. Unless a vigilant oversight is established, not only is a careless habit induced, but faults are perpetuated. A plan which has been successful is to give the teacher in charge of the class a little book in which to enter mistakes. Passing behind the children, he underlines each misspelt word, and then enters it in his book. At the close of the exercise these words are written on the black-board, copied, and subsequently dictated.

4. **Composition.**—This is one of the most effective tests that can be applied to orthography, as well as a valuable means of impressing the pupil with its importance. Its value consists in bringing to light many words that never turn up in other school exercises, and in showing the peculiar defects of each child. Such knowledge is valuable, as it presents an opportunity of adapting instruction to the special wants of the class. Composition may be connected with object lessons, the learner being required to write the points that have been brought under his observation. Or an object, or class of objects, may be given to have written all the words descriptive of them; thus,—Leaves are “thick, thin, polished, rough, indented, even, trifoliate, scolloped, hairy, downy, dull.” The sky is “serene, stormy, clear, overcast, misty, hazy, foggy, gloomy, lowering, bright, resplendent, brilliant, deep, dull, brazen, ruffled, red, azure, vaulted, boundless.” Other means will be found in abstracts of lessons, writing freely in their own way stories read to them, and in paraphrasing.

## CHAPTER VI.

### ARITHMETIC.

**General Principle in Arithmetical Instruction.**—Like all subjects that partake of an abstract character, the instruction must commence with the concrete; otherwise a subject which is fitted to discipline the mind, and to secure for it intelligence and thought, becomes simply an exercise of verbal memory and rote. In every stage of the pupil's progress recourse must be had to things, or diagrams where they can be used, to aid in the formation of the conceptions with which the subject deals, and to make him intelligent in the operations he performs. The general principle of the instruction is to advance from examples, aided by things and diagrams when possible, to rules. On this plan the pupil, while having the process exemplified and expounded, gets an insight into the principles on which the operation is founded, and deduces a rule for himself. Or, if not able to do so, he is better able to appreciate the one given than if he had worked by rule alone. It will also be found that one who is accustomed to realize thus the processes and principles of his work will make more rapid progress than he who works by rule and rote.

#### Section I.—Arithmetic in Infants' Classes.

Instruction in arithmetic in infants' schools has to convey the idea of number and operations with numbers to the learner.

**I. The Concrete.**—The first operations must be with things. The value of arithmetic as a mental discipline at a later time will depend on the care taken in its early stages to make its processes and results intelligible.

**I. First Step. (a) Number to Ten.**—Notions of number are given by means of things. Peas may be first used, then marks on the black-board. The peas must be placed in groups, and each group must stand apart from the others. The groups must run in order, one, two, three, and so on. In naming the group, the name of the thing should be added—one pea—two peas—one mark, two

marks ; one unit, two units. The child must be led to see that each group is one more than the preceding and one less than the following. He must learn each group and its name before he is taught figures. When taught to make figures it should be seen to that he associates each with its unit value. In speaking of the figures the teacher must be careful to say one unit, two units, and so on ; for the child has to learn that the names one, two, three, belong not exclusively to groups of units, but to other groups and columns. The more careful the teacher is in expressing himself accurately the sooner will the infants acquire the conceptions intended.

(b) **Adding and Subtracting to Ten.**—The process of increasing a group, or of diminishing it, with the result, should be gone through in every possible combination, till the children become expert with the objects before them, in adding or subtracting to ten.

**2. Second Step. Mental Operations**—When the infants have clearly grasped the conception of numbers to ten, and have gained some facility in adding and subtracting groups, they should have exercises to work without the aid of the objects. In these, reference should be made to many familiar objects, trees, animals, and things. Such exercises, by separating the operation from a particular class of objects, are valuable as a link between the concrete and the abstract. They also help to form the habit of realizing the conditions of the problem before solving it.

**3. Third Step. Preliminary Slate Arithmetic.**—For some time the learner must be confined to the concrete, and to mental operations. No advantage can accrue from pushing him on too rapidly to work with symbols. Still he must be gradually prepared for this. His first work will be to make the figures, in doing which he should be accustomed to attach to each its value, so that the symbol and its meaning may be permanently associated in his mind ; next, he should work on slate the examples that have been previously worked by the aid of things and mentally ; and to these should be added so much practice on small numbers in the fundamental operations, that he may work with facility.

**4. Fourth Step. Number above Ten.**—This step will require from the teacher skill and care, as it is not only difficult in itself, but on its clearness depends whether

the child's progress shall be intelligent and steady. Four things have to be explained ;—that things are grouped in tens, that to such groups are given the same names as to units, that they are expressed by the same figures, and that, in so expressing them, there is the device of place. (a) The infants may be prepared for the step by speaking of one flock of sheep, two flocks, and so on, where they will find no difficulty in applying the term one to a group containing many. Then, by means of peas and beans, let it be shown how *one* may stand for ten. Let the children group the peas in tens, and for each group of ten put aside one bean, then the number of tens will be represented by the beans. This may be still further illustrated by reference to common practices amongst dealers in eggs, apples, and other things, where for every group counted, one is put aside. The teacher's ingenuity will suggest to him many modes of making the point clear. He must keep at it till it is clear. (b) Next take the notation, and show how the figures one to nine may represent not units only, but also groups of ten. Show also the use of the cipher. Exercises in addition and subtraction may be given, dealing at first with tens only, as  $20+30+40$ . (c) When composite numbers are introduced there should be frequent practice in separating the numbers into the groups indicated by the names. Tell them, for instance, to put 25 peas into tens and units, or to put down 34 in groups of marks on their slates. Let the same thing be done orally. On the teacher saying, "46," let the class say, "Four tens and six units."

**5. Fifth Step. Simple Operations in the Four Rules.**—The Infants' school is not the place for systematic teaching of arithmetic, the strain would be too great for the immature brain. Clear conception of the smaller numbers, and facility in manipulating with them, so as to give first notions of the operations are all that should be attempted. The teacher will find considerable help in the Pestalozzian table of unity—a table which he may construct for himself. It is formed of 144 squares, arranged in rows of 12 squares. In each square of the top row is one mark, in each square of the second row two marks, and so on. By means of this diagram the children may have practice in all the rules, and may be assisted in committing the four tables intelligently to memory.

## Section II.—Arithmetic in Junior Classes.

**I. Aims.**—Arithmetic, as a school subject, may be regarded in the light of its practical value, or as an important means of securing a special discipline to the mind. It is an art, and in this aspect it must find its chief place in the junior classes ; but it is also a science, and this fact must determine the nature of the instruction, and above all its *method*. For the truth cannot be too strenuously urged, that the more intelligently a subject is taught, the greater will be the power and practical skill accruing from it. As a fact there is no school subject in which right method is more necessary than in this. There is no subject of elementary instruction that has not its special educative power. It is the learner's first introduction to the exact, and, rightly taught, it gives him that kind of discipline which awakens in him the feeling of power. For it fixes his attention, gives him clear notions, and enables him to verify his results. On the other hand, there is no subject so liable, under bad method, to yield poor intellectual results. It is quite possible to become an expert calculator without any other faculty being exercised but memory. What shall be the kind of result will depend on the method. Here especially it may be said to the teacher, as in other subjects : “Judge your method by the demand it makes on you and on your pupils. If it requires from you no thought, no casting about for expedients, no exhaustive analysis of your knowledge, no demand on your invention, it is a poor method, and will be productive of poor results. The demand on the pupils' mental activity will be determined by your own ; for you may set it down as an axiom, that a method of teaching that makes little demand on the teacher will be futile in respect to the scholar.” Now as mere rote and rule methods require no mental effort from the teacher they will be fruitless with the learner. Mere repetition and constant reiteration can secure only barren results. On the other hand right methods give clear notions of processes, establish principles in the mind, and make the pupil capable of that reasoning by which he can establish the truth of attained results. Hence they make a demand on the teacher which is reciprocated by his class.

The objects to be held in view in the junior classes, are

clear intelligence of processes, facility in calculation, and practical skill; with the constant aim of obtaining that special educational discipline which belongs to the subject.

1. **Clear Conception of Processes.**—Acquaintance with the process is the first step towards practical skill in any operation; and the more intelligent it is, the sooner is skill acquired. A knowledge of the process must precede any attempt to give theory or to supply a rule. Theory, in fact, implies that the conceptions it embraces are already in the mind, and the rule is universal that it springs from or is based on practice. The process must be made clear by examples from experience, aided in every possible case by sensible representations, either objects, marks, or diagrams. When these have set forth the process, it should be made familiar by well-constructed examples, to be worked mentally. The steps in each subject should be very gradual, and each should be accompanied by numerous exercises, and the familiarity thus obtained will aid to take the further and more difficult step. The process must not be confounded with the *written form*. It is necessary to note this, as the word process is often applied to that which is presented to the eye as a mode of working. Our use of the term comprehends all that is fact, or that is mental, underlying the *form*. An amusing incident will illustrate the distinction. One of H.M. Inspectors placed 8

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on the black-board of an infants' class, and asked which could take 5 from 8. A little fellow ran forward, seized the duster, and rubbed out the 5. Evidently the written form had in this case no meaning for the child, although he gave such a practical illustration of subtraction. Two things then are required from the teacher, first that he shall make clear the actual process in fact and mental working, and then that he shall explain the written form, so that there may be intelligent manipulation by its aid of the questions given for solution.

2. **Facility of Calculation.**—This, when a process is clear and intelligent, is a matter only of memory, and depends on practice. The two things to be secured are accuracy and rapidity. (a) *Accuracy.*—Some of the devices by which this important habit

may be established are—A thorough knowledge of the tables, much practice in calculation ; not allowing, when working from dictation, an exercise to be worked a second time, if it was wrong on the first working ; not to count as done, an exercise in which any figure was altered during the operation, and to have the work on paper frequently. (b) *Rapidity*.—Dictation of examples should form a part of the daily work ; this will secure competition, which is usually sufficient to stimulate children to put forth their best energies ; yet, in connection with it, the following may be useful towards securing quickness. To limit the time for working each example. To keep a record of the number of exercises worked correctly by each pupil,—the pupil to mark his own on his slate, to be transferred to a register at the close of the lesson. To record also the number any pupil has done first. For example, John Jones,  $\frac{1}{2}$ , would read, 16 worked correctly, 7 done first.

3. Practical Skill.—Practical skill in dealing with questions to which arithmetical rules have to be applied must be sought by well selected problems of increasing difficulty at every stage of the learner's advance. They must form a daily part of his work if he is to be prepared for his future life. For the exercises which present themselves in business are usually problems that require the worker to discover certain conditions before he can apply the processes of calculation with which he is familiar. Should the pupil, therefore, be restricted as a learner to working set examples, in which all he has to do is to apply a rule, he is not prepared for problems in which he must ascertain the conditions, that he may find a rule for himself. Besides, the discipline obtained by studying the processes and working examples is not comparable to that obtained from working problems where he must discover the conditions before he can apply a rule. On these grounds the pupil should from the first be supplied with problems graduated in difficulty, requiring this casting about of the mind before the result can be worked out. In working them it is desirable to notice that the more independent the pupil is in his solution, the better is the discipline ; he should be encouraged, too, to find out several modes of solving the same problem ; and in some cases he may with advantage write out the whole process, so as to exhibit

clearly the principle on which he has worked. Dictation of work to be done, allowing the class to put down only what is absolutely necessary, is an essential condition to the attaining of practical skill. In business, they will have more frequently to listen to the data of an operation, than to work from copy ; and for this the practice of working from written examples will not prepare them. Dictation is recommended also because it requires and fosters quickness of apprehension, strengthens the memory, and is to some extent a test of the knowledge of the children. In dictating, the mode ought to be frequently varied, or the children get into a groove. *The help* to be given by the teacher towards the solution of difficult problems is an important point. As a rule the pupil should solve every problem himself. Here, if he fails, he must try again. But this rule must not be strained too far ; he must not be discouraged and his energies must not be wasted. Help must sometimes be given, not by solving the problem, but by such aid as will enable him to do so. Sometimes this may be done by throwing light on a term which he does not understand ; or by solving an easier problem of a similar character ; or by breaking up a complex one into the simpler questions composing it.

4. *Special Educational Discipline.*—That the pupils may gain all the intellectual benefit at this stage, the teacher should thoroughly understand the educative power of arithmetic, and should keep it in mind in all his work. Whether he is engaged at the black-board giving the first notion of a new operation, and making clear the actual process ; whether he is preparing graduated examples and problems ; whether he is dictating exercises, or appointing silent work—he must never have absent from his own mind the qualities he ought by means of arithmetic to impart to theirs. The *basis* of its special educative value is its exactness. It gives exact notions, and its operations lead to exact results. Its great characteristic under this aspect is the easy form in which its facts may be presented at the beginning, and the gradual advance to the complex and difficult. Every fresh effort is helped by those that have preceded, thus giving the mind power ; nor is the mind ever asked to assent to what it cannot apprehend, or to leap a chasm over which it cannot step. *Another element* in its educative value is the

gradual leading up to the *exercise of abstraction*. It does this by proceeding from concrete examples, through mental operations based on experience, to the use of signs, symbols, and figures. Its special use for this purpose is in the exactness of its matter and in the power of correcting or verifying facts by appealing to the concrete. The power of abstraction in its higher exercises, has been declared to be, by Isaac Taylor, the crowning attribute of the human mind. This being so, the first means of bringing it fairly into play under such favourable conditions, must be considered an invaluable educational agent. The culture of the power of abstraction implies *quickness of apprehension*. This quality of mind is promoted by the very same conditions which give to arithmetic its special educative force. The quality itself has been declared to be the keystone of learning, and accounts for the difference between the apt pupil and the slow one. A clever pupil takes impressions rapidly and firmly, easily as wax, lastingly as metal. An inapt pupil is one who as stone resists or as sand immediately loses them. Arithmetic rightly taught, tends to change the inapt scholar, by cultivating in him quickness of apprehension. An additional element in its educative power, is its tendency to form a habit of *correct inference*. This has the same basis as the other elements, its matter is exact, so that there is never ambiguity in its terms, except the questions include extraneous matter. Rightly taught, arithmetic also helps *invention*. Thus after clearly giving the notion of a new operation, the pupils may be expected to invent a form of working, or in giving questions they may be encouraged to invent modes of solution. The value of arithmetic to the memory has been noticed.

**II. Instruction.**—Instruction in junior classes should embrace all those operations which are likely to occur in ordinary business. Thus it will include the two fundamental operations in their fourfold forms, and their applications to money and common weights and measures; it will also cover reduction, practice, bills of parcels, and simple proportion, including elementary notions of percentages. It should also embrace some of the simpler operations in mensuration.

**1. Numeration and Notation.**—Vague notions lead to wrong methods. This is verified in relation to these matters, for in no part of school work are there such

frequent complaints of failure and want of intelligence. Young teachers should see that they understand the terms. *Numeration* is a system of numbering. It includes the grouping of numbers, the mode of grouping, the names given to the groups, and the reading of combinations of groups. *Notation* is the representation of number to the eye. It has a similar relation to numeration that writing has to speech, for there must have been numbering before the art of writing was invented. Such a notation as the Roman seems to have had a very primitive beginning. Any one familiar with the way a village beer-seller scores the debts of his customers, will see how it had its origin. *Instruction* in numeration and notation should be synchronous with the pupils' advance in the power of calculation. For it is absurd, as pointed out by De Morgan, to expect children to grasp the higher conceptions, until by an extensive practice they have become familiar with number. It may profitably be extended over three stages : the lowest class should not go beyond 1,000, the next class may advance to 100,000, and the next to 1,000,000. The instruction in the lowest class will be an extension of that of the infants' school. There they have been taught grouping by tens and the device of place. In proceeding to 100 and 1,000, similar illustrations may be employed as in the earlier stage ; but the necessity for it should first arise as when the answer in an addition sum exceeds 100 or 1,000. *Writing numbers correctly* will be aided by a practice which makes them so familiar to the eye that it will at once detect a mistake. Columns of figures should be placed before the class and read before dictation :—

101	102	103	up to	110	1,001	1,002	1,010	1,011	1,101	1,102
201	202	203	"	210	2,001	2,002	2,010	2,011	2,101	2,102
301	302	303	"	310	3,001	3,002	3,010	3,011	3,101	3,102
401	402	403	"	410	4,001	4,002	4,010	4,011	4,101	4,102
&c.	&c.	&c.		&c.	&c.	&c.	&c.	&c.	&c.	&c.

If the instruction in the lowest class is sound, clear, and thorough, and the practice so frequent as to exclude mistakes, there will be little difficulty in the later stages. The points needing attention then will be period as well as place, the recurrence of the old names and figures with new values, the separation of the periods by commas, much dictation of examples involving every possible statement, constant practice in reading large numbers,

and frequent expressing by figures what is written in words.

**2. The Four Primary Rules.**—It is unnecessary to give forms of working these. It will be sufficient to indicate a few things which should guide the instruction. Each step should spring, as far as possible, out of the preceding ; for instance, the method of analysis in subtraction admits of easy illustration from notation, and should be used before that of equal addition. When a new step is taken there should be much practice with short and easy examples, until the working is familiar. Discourage everything that prevents retentiveness, accuracy, and speed ; such as setting down figures that have to be carried, and repeating the figures when adding or otherwise—as 5 and 8 are 13, 6 times 9 are 54 ; only allow the result to be given, as 13, 54. Encourage your pupils to make independent effort, and not to look for everything to be anticipated for them. Especially remember that they should be led up to discover principles from their working ; and that there should not be formal instruction in such principles until familiarity with the working has prepared the way. We are to teach up to first principles, not *from* them, though the teacher should be guided *by* them. Thus learners should discover from their practice that likes are added to likes, and thus see why figures should be placed in their proper columns ; that all the parts taken together in any order make the whole, and so invent modes of verifying their results ; and that acting on all the parts in succession is equivalent to operating on the whole. An important rule is to anticipate and prepare for coming work. It has just been shown that the mind must be familiar with facts before it can establish a principle, hence anticipate. For instance, do not follow the silly practice of having remainders in division. When the learners are sufficiently familiar with the working of examples in which the quotients are whole numbers, set an example which will leave one, as in  $473 \div 4$ . This one is to be divided into four equal parts ; deal with it rightly, and the children will get their first implicit notion of a fraction, and of its expression by figures. Follow this up, continue it through all later working, and they will come, at a later stage, with minds prepared for systematic instruction in frac-

tions. Be careful at all stages not to introduce short methods of working before the process is clear and familiar ; thus long division *as a method* should precede short.

3. **Compound Rules and Reduction** —It is advisable to introduce easy examples in money while the pupils are engaged on the primary rules. This not only furnishes a variety in their work by introducing a different mode of numeration and notation, but it also gives a meaning to it and excites an interest, which the more abstract course does not. There is also the advantage of the demand on their attention ; there is such a tendency to run in grooves, that lads need to be roused to exert themselves. The mixing of money sums with abstract ones effectually dispels sloth. When removed into a class whose chief work is in the compound rules, they should be encouraged to discover short forms of working. Invention shows a clear and firm hold of the subject. Reduction will be taught practically in working through the compound rules. When introduced as a special part of the course, care should be taken that the children understand that the result of each operation is an equivalent value to the former, and not a new one. Hence the teacher must avoid the common practice of saying that in changing pounds to shillings, shillings to pence, we multiply by 20, or by 12.  $\text{£}5 \times 20 = \text{£}100$  not 100 shillings. In such a case it should be shown that it is 5 times 20, though in large operations for convenience we use 20 and 12 as though they were multipliers. In an exact science we must be exact in the use of its terms. Instruction in *common weights and measures* should be practical, and illustrations should be drawn from the employment of the district. Where possible the actual weights and measures should be introduced, and the facts verified by experiment. Thus a pair of scales and the several weights, a measuring tape, and the smaller measures of quantity may be so utilized. In measures of surface the figures may be drawn on the black-board, or on the floor, or may be marked out in the playground and the facts presented to the eye. It is well to have a square inch, a square foot, and a square yard drawn permanently on a part of the school wall. As children become familiar with the work of the class, the coming stage should be anticipated by problems involving the application of division and multiplication.

4. **Practice, Simple Proportion and Percentages, and Mensuration.**—If the course of instruction has proceeded on the lines indicated, children when they come up to this class, will have had some practice in working fractions, in short methods of finding results, and in elementary applications of proportion; they will also be prepared for instruction in the mensuration of simple forms. In advancing to more formal instruction, advantage should be taken of the learner's acquired power and a greater demand should be made on him. *Practice and proportion* will furnish the opportunity of taking him through short processes of reasoning, will give him expeditious modes of working, will strengthen his grasp of arithmetical principles, and will extend the sphere for the exercise of his inventive power. Care must be taken that he gets all the benefit of this part of his course. The rule must be stringently observed that an exact science requires an exact procedure, and the teacher must avoid the common departure from this rule found both in *practice* and in *proportion*. For instance when illustrating the methods of *practice* on the black-board, the teacher should take care to put the aliquot parts in a line with the results obtained and not with the line above. The mensuration of rectangular figures will be found an easy and a profitable exercise when the children have been properly instructed in the measures of length and surface.

### Section III.—Arithmetic in Senior Classes.

1. **Arithmetic.**—In the senior classes it must secure all its intellectual advantages to the pupils. Some of these advantages have been already indicated. They may be gathered also from the descriptions given of it. Professor Moseley says: "In exercising the reasoning faculties, and forming the understanding, its functions are the same as those assigned to geometry in a higher stage of education; it is the Euclid of elementary schools." Another writer has said: "No subject in the whole curriculum of elementary education is so admirably fitted for training the reasoning powers; it is the logic of the common school." Exception might be taken to this last position thus stated and to this old use of the term logic; as assuredly the sphere of arithmetic in training the reasoning powers, and in setting forth and

illustrating the laws of thought is a very limited one. But while saying this there can be no doubt that arithmetic may be so taught as to take the learner through processes of reasoning, and that it has special claims as introductory to such discipline. In calling it the Euclid of the school, more is not claimed for it than belongs to it. Yet there is a very important difference between the two. As a pupil advances to a fresh proposition in Euclid, he finds that he must make use of the one he has just mastered, and of others preceding it, but this is not so in passing from an example in arithmetic to the next. Here the one example is not necessary to establish the truth of the other. But on the contrary, after disposing of all that distinguishes the one from the other, his process of reasoning is the same in the second case as in the first. This in fact is one of the advantages of arithmetic. The instances given may be so numerous that the mind becomes thoroughly familiar with the reasoning, and thus it is that better results are expected from examinees in this subject than in others where each subject involves a new course of reasoning. There is in this, however, a disadvantage, for the process has a tendency to become automatic, and then there is no increase of reasoning power. The remedy will be found in constructing problems which shall require independent reasoning before applying the arithmetical formulas.

2. **The Instruction.**—This in the senior classes should include fractions, vulgar and decimal; proportion and interest, simple and compound, and all the related rules; evolution and mensuration. In those subjects which admit of it, aid should be had from diagrams, as in fractions and mensuration.

3. **Summary.**—We now sum up the advantages to mental discipline of arithmetic taught as recommended in the preceding pages. They are very great. Its tendency is to give clear ideas, and a full perception of the relation between symbols, thoughts, and facts. It accustoms the mind to habits of investigation, and weakens the tendency to take things on trust, the proof of which is within reach. Some of its simplest problems, if given for investigation, may be made matters of severe discipline. The practice of verifying the results by a different process from that by which they are obtained, tends to produce

an exact mind. As there are various methods of reaching the same results in many cases, originality and invention are promoted. And the higher problems aid concentration of mind ; the mind being put on full stretch to reach a certain end, and yet, from the very nature of the process, it is able to keep its attention down to the point that happens to be before it. Thus it is the best introduction to habits of accurate reasoning. For its principles are of easy acquisition, its elementary facts beyond the possibility of dispute, and its terms are exact. The reasoning proceeds also by easy steps, which may be absolutely tested until the conclusion is reached.

## PART III.—SUBJECTS OF CLASS INSTRUCTION.

CHAPTER I.  
LEARNING.

1. **Teaching and Learning.**—These terms express the two factors of intellectual culture. The former tends to quicken, to develop the intelligence, and to put the pupil on the right track of acquiring knowledge for himself; but the latter is equally necessary to the growth and vigour of his intellect. The former gives the heat and light by which the principle of life is brought into activity and made manifest, the latter is represented by the nutriment which the plant absorbs from the soil and air. All the value of the former consists, in fact, in the degree in which it secures the latter. The habit of self-exertion is the great aim of all instruction, and of all arrangements for the pupil's advancement. "No one ever became a scholar by the efforts of his teacher. Personal application is the only road to knowledge." "All the best cultivation of a child's mind," says Temple, "is obtained by the child's own exertions, and the master's success may be measured by the degree in which he can bring his scholars to make such exertions absolutely without aid."

2. **Class Subjects.**—This being so, when the learner has made some progress in the arts of reading, writing and arithmetic, he should be introduced to subjects, where, by their aid he may acquire knowledge and promote this self-discipline. Oral teaching is not to be discontinued, nor are lessons in the arts to cease, but the object of both must be sought also by teaching the learner how to gather knowledge from books, and how to read them to the best advantage. We term such subjects *class subjects*, because from their nature and recommended mode of acquisition,

they cannot be the work of the whole school, but only of classes therein, unless the school is of a higher grade than elementary. We also term them class subjects to indicate that they are to be taught systematically, each lesson being built upon those which have preceded.

3. **Selection of Books.**—As the object is to train learners to read books rightly as well as to furnish their minds, great care should be taken in the selection of books. There are still too many books in use to which the rebuke of Isaac Taylor applies, that “we begin the instruction of a child where the philosopher ends.” Few of such book compilers have seen that the scientific study of a subject implies that the mind has been first furnished with the facts which form the subject matter of it. First books should furnish the learner with the facts as fully set forth as may be, and the chief part of the teacher’s work should be to amplify and illustrate them. When there is a difficulty in providing the right book in the early stages, the teacher must supply its place by oral lessons, continued until the children are prepared to study such a book as can be had. The books for this purpose should contain no difficulties of language or style.

4. **Conditions of Success.**—If the teacher would secure thorough and sustained application by his lads to the subjects which he would have them acquire through books, by the aid of his oral examination and exposition, he must bear in mind the following important facts.

(a). Interest in the task is a powerful stimulant to exertion, and such interest is readily excited by giving something to do which is within the pupil’s power. Give employment in thinking and finding out, and let the hand aid the head, and their interest will be greater than if they are merely committing to memory, or are but receivers from others.

(b). A definite portion of work to be mastered in a given time is another stimulus to exertion. This obvious condition is often overlooked, especially by young teachers, and where the lesson admits of being indefinitely prolonged. Yet its influence over the scholar claims for its constant recollection; as, knowing how much he has to do, he works with greater energy, and as he is better able to mark his progress, he works under great encouragement.

(c). **A spice of difficulty** is an incentive to exertion, if care is taken to adjust it to the pupil's power. Lads will dawdle over that which requires no effort, but they brace up their energies for that which does, supposing it to be within their grasp. They are stimulated, too, if the teacher acknowledges the difficulty. Their difficulties should never be underrated, for then they will be discouraged, as they will not expect to receive credit for what may require severe and prolonged effort.

(d). **Thoroughness**.—It is essential that all initiatory processes should be learnt thoroughly, and in fact, that every lesson in any way necessary to the understanding of those that follow be fully mastered. Without this the pupil is as one stumbling in the dark. By the practice of passing through lessons without mastering them, "a load," says Dr. Bell, "of toil and tedium is laid up; and the scholar, conscious of his imperfect and slow progress, and puzzled and embarrassed by every lesson, everywhere feels dissatisfied with the irksomeness of his daily tasks, and alike disgusted with his master, his school, and his book." The frequent neglect of this rule in the lower classes of a school is unaccountable, when it is considered that the teacher's own experience must show it to be the basis of all real progress. It may be irksome, it may be drudgery, to drill in the elements, but the toil is amply repaid in the rapid advance of the pupil at a later stage, and in his ability then to brace himself up for a keener encounter of wits than could otherwise be expected. What has been said of learning a language, that to "spend a few weeks over a few pages of easy narrative, until the whole is familiar, lays the best foundation for progress," is equally true of the elements of every study in which a learner can be engaged.

(e) **Repetition**.—In order to thoroughness, there must be a judicious system of repetition. Unless frequently repeated, the impressions made on the memory wear off, or the power is lost. Repetition must be without sameness. One requisite is to graduate the lessons, so that every step may prepare for and anticipate the succeeding one; another is to combine the new matter of a lesson with the old, by which means, while making fresh acquisitions, a hold is retained of those made before; and to these must be added recapitulation, or going over an entire

series of lessons a second or a third time, but more rapidly than in the first working.

(f) **Reproduction.**—It will be found advantageous to the thoroughness of instruction, and to active and vigorous exertion of mind, to have that which is taught or learnt reproduced. Reproduction may be by a mere abstract, by a rendering of the sense by the pupil in his own words and way, and by working out principles in given examples. The first of these stimulates attention and strengthens the memory. The second is one of the most valuable aids in training the intellect which the teacher can command. The effort to set forth in his own way that which he has been taught compels the pupil to grasp it thoroughly. He has to look at it through the medium of his own language, and he cannot do so unless he comprehends it clearly. The very effort to do this gives him a clearer conception of it, and requires from him a greater exertion of power than was needed when listening or learning. The importance of such reproduction will be readily appreciated by all who have ever experienced the difficulty of conveying to another a subject which they thought they understood, until the attempt to communicate it showed some important points overlooked or but dimly seen. The third plan of reproduction has a similar value. It is often found that a pupil goes through the demonstration of a principle or the working of a problem with apparent intelligence when stimulated by the teacher's questions, or aided by his suggestions and illustrations, who utterly fails to apply the principle, or to work out independently a much easier example. This is perhaps due to the difficulty of binding the whole up. The parts, as they successively pass in review, are understood, but the whole is not. This is to be obviated by making it the rule to recapitulate the whole lesson, and to give examples in all possible cases for independent practice. If this is done, there is obtained from the pupil an exertion, self-sustained and energetic, which previous teaching prepared for, but itself did not realize.

## CHAPTER II.

## GRAMMAR.

**I. Educative Value.**—English grammar, as a school instrument, has claims both on account of its practical utility and its educative power. These are closely allied, so that rightly pursuing the one we accomplish the other. In its instrumental character some teaching of it is necessary to aid in forming the habit of intelligent reading. Rightly taught it will help the learners to gather from books their contents, and will give power to master the thought intended by the writer. How far the claim can be sustained that it teaches to speak and write correctly is doubtful. Many who have passed through a course of grammatical instruction have done neither. Correct speech is the result of habit formed by imitation and unconscious induction in the society to which the learner is accustomed ; correct writing is the result of much practice in composition, moulded by the habit of reading good authors. It is true, that with practised writers, a time comes when grammar has an influence in composition, but it may be safely affirmed that this is not to any great extent during attendance at an elementary school. Though no doubt the fact is so, that using it as an instrument in aid of intelligent reading, it does indirectly influence the thinking, and consequently the composition. It is also to be noted that it has a critical value, by furnishing a standard by which to test the accuracy of language, spoken or written.

**The Educative Power** of English grammar is due to its matter and to its methods. Its matter is difficult. It has no stage so simple as that presented in arithmetic, the first notions of which can be obtained from the concrete. The nearest approach to this is in the fleeting sounds which fall on the ear, or in the forms of words placed before the eye. But these are only symbols,—the real subject is hidden and abstruse. The forms represent modes of speech, and these represent mental states. Now, it is only as the pupil traces out these relations, and masters the mental facts, that he obtains an intelligent

acquaintance with the subject. Thought and its elements, as represented in sentences, words, inflections, and syntactical relations are the objects on which the learners' minds are fixed. It is on this ground that grammar has been called the logic of the elementary school. This designation however has been misunderstood, because it was not seen that the term logic, so used, has not the obsolete meaning of the "Art of Reasoning," but the modern one of the science of the laws of thought. Logic deals with the laws of thought as embodied in certain forms of language; grammar also deals with thought, as it finds expression in speech. Those who teach grammar empirically as dealing only with visible signs, and take no note of its hidden facts, except so far as to make their teaching intelligible, can never secure to their pupils this logical culture. But when grammar is taught by a right method, that is inductively; when the course is pursued which nature has indicated by the way in which she has secured correct speech; when attention is directed to thought, of which language is the expression; when sentences are analyzed with the view of gaining power to master the thoughts therein; when from the offices they sustain in speech words are inductively classified; and when from the relations which exist between words in sentences, inflections are discovered and their meaning;—then grammar takes its place as the logic of the elementary school, just as arithmetic properly taught is its Euclid. "The importance of training the mind," says Morell, "to accurate logical thinking, can hardly be overestimated, for although the logical faculty is not the highest faculty in the mind, yet it is of all others the most practical; that, namely, which is the most directly necessary for the occupations and duties of daily life.

. . . The best preparation I believe to be a thorough well-grounded knowledge of *grammar*: for all language is really based upon a kind of natural or intuitive logic, and to understand the structure of language aright, enables us to follow the workings of the understanding as it has embodied itself in this outward and symbolic form."

II. Method. 1. The Common Method.—The method of teaching English grammar from its introduction into a course of elementary instruction to a recent period, made it the most uninteresting and wearisome of school

subjects. All who have given attention to the history of school method know that the mode of teaching it was based on the old plan of teaching Latin. This was a mode that put the learner through a course of rote instruction in classification, inflection, and syntax before they had any acquaintance with the language. It was in vain that, each in his day, such writers as Ascham, Comenius, Milton, and Locke protested against the course on the ground of its absurdity, and proposed a more rational one. The plan held sway till very recently. But there was something to be said for the old teachers. For the inflections to which the several classes of words are subject must be known before the learner can engage the simplest sentence in Latin ; their mistake was in giving a complete course before introducing to sentences. Since the revival of interest in educational method, a better plan has been adopted with Latin and other languages, and it has also been seen that the method is utterly wrong when applied to English. For such teaching ignores the fact that words cannot be classified by those ignorant of their office and meaning ; and it overlooks the further facts that inflections of words grow out of their relations, and that the cases of nouns and pronouns and the moods of verbs cannot be understood before a knowledge of the structure of sentences has been acquired.

2. **Method proposed.**—It has been found very effective to proceed from the first by analysis and induction, accompanied by exercises in composition. This method starts with the sentence as the unit of speech, and it leads the learners to resolve it into its elementary parts as representatives of elements of thought. It brings before the learner at first sentences in their simplest form, as, ice melts, water flows, rain falls, John reads, and it proceeds by gradual additions, to sentences of every variety and of the most complex kinds. In the whole course the teaching is analytic, and the main facts and laws of language are obtained by a process of induction. At every fresh stage sentences of similar formation are written on the board, and attention drawn to those parts which form the basis of the lesson. In this way the learners are led to classify words, to discover their relations, and any inflections arising therefrom, and the rules of arrangement and government. Formal definitions of any matter must

follow this inductive process. But there must be no haste. Definitions are only valuable after the investigation of many facts, and when they are seen clearly to comprehend them. With these lessons in analysis should be associated lessons in *composition*, the classes which have had analysis one day, being set to form a number of sentences on the same model the next. A clearer insight—always an effect of reproduction—will be gained from this synthetical exercise, at the same time that there will be secured that independent application which ought always to be associated with the studies of this stage. But though both analysis and synthesis are to be employed in connection with each individual lesson, the course of lessons must be synthetic.

**III. Graduated Course of Lessons**—The teacher who would secure to his children the greatest benefit from the study of grammar on the principle now advocated, must have a graduated course of lessons, so that at each point he may introduce the facts for which the children have been prepared by their previous work. The following is a rough outline of the order of such a syllabus.

**First stage.**—Simple sentences in connection with object lessons. The points at this stage are—(a) the parts of a sentence, not the names, subject and predicate, lest words take the place of ideas ; (b) the words used—noun, verb, adjective.

**Second stage.**—Simple sentences enlarged ; their parts, and the words—adverb and preposition.

**Third stage.**—Simple sentences enlarged ; their parts, and transitive and intransitive verbs.

**Fourth stage.**—Simple sentences enlarged ; their parts, the personal pronoun introduced, case of pronouns, and the alterations in the verb according to the pronoun employed.

**Fifth stage.**—Simple sentences enlarged. Number of nouns, pronouns, and verbs ; moods and tenses ; weak and strong verbs. Progressive and complete forms.

**Sixth stage.**—Complex and compound sentences. Relative pronoun and conjunction.

**Seventh stage.**—Place a text book in the hands of the pupil.

### CHAPTER III.

### GEOGRAPHY.

**I. Its Educative Value** — Geography, when properly taught, combines the two advantages of a school subject, practical utility and educational value. The former is sometimes recognised, but the latter not ; for it is a too common practice to put into the hands of the learners “trashy epitomes,” crowded with names and definitions, which secure neither. That it may secure good results it must be taught on right principles.

**1. Observation.** — The facts of geography have been obtained by observation and sound induction. The same course must be pursued if the learner is to obtain a right knowledge of the subject, and derive from it mental culture. It is true that his sphere of observation is very limited, and that he must take the majority of his facts on trust ; but if he is to realize these, or gain anything from what he is told, his own neighbourhood must furnish him with the topics of his first lessons. These should utilize all that he can observe, whether by a walk in the country, the ascent of a hill, or even a ramble through a town. It is thus that the near and familiar will furnish him illustrations and types of the remote and the unknown. A plan of the schoolroom and town may be introductory to the use of the map, or may at any time illustrate it ; the ideas of direction may be given by means of local objects and the schoolroom ; that of area by a slate, the schoolroom, the playground, a neighbouring field, and a tract of country commanded by some place in the vicinity ; a pond compared with a basin of water might be magnified into a lake or sea, a hill into a mountain, a narrow stream into a mighty river. By means of *clay models*, the teacher may give ideas of surface, headlands, bays, straits, lakes and rivers, and of places, as the Isle of Wight, where other plans fail.

**2. Conception and Imagination.** — From the nature of the case much will have to be conceived or imagined by the learner. The aim must be to give him ideas rather than words, the instruction must be real, not verbal. Hence there must be graphic description, or word-

painting, for the children have to conceive in their own minds the pictures the teacher has in his. Such a picture as would exist in the mind after a visit should be the standard of the teacher ; though he must remember that from the indefiniteness of language, even when aided by maps and diagrams, the children's conception will not exactly resemble the reality. Aid should be sought from pictures of scenery, costumes and natural objects. The teacher must do what he can to remedy the defects arising from words not being exact in their signification. He should never forget the fact, and he should take every opportunity of giving a definite meaning to terms, which he may by associating similar terms in the mind, and when one is used, calling for the others, noticing the shades of difference in their signification—*e.g.*, cape, naze, head, promontory ; ascent, hillock, hill, mountain.

3. **Memory.**—As much is committed to the memory, care should be taken not to burden it with minute details, nor by giving names merely. Few subjects offer better opportunities of aiding the memory through the laws of association than this. Names of places may often be associated with natural features, present circumstances, or past history. The name then suggests the fact, or the latter recalls the former ; *e.g.*, Coblenz, Lisbon, Wolfe, Sir John Moore. The resemblances which may be traced, or the contrasts which exist, are means of association not to be overlooked,—*e.g.*, Holland and Switzerland, and the great continents. The classification of similar facts, and the tracing of cause and effect, will be found valuable aids to the memory. A plan adopted by Pillans, of aiding the memory by poetry, seems worthy of general use.

“That renowned flood, so often sung,  
Divine Alpheus, who, by secret sluice,  
Stole under seas to meet his Arethuse.”

“Nymphs and shepherds dance no more  
By sandy Ladon's lilyed banks.”

Map-drawing from copy and from memory will be found useful, but too much time must not be given to it.

4. **Understanding.**—The higher branches of geography enable us to give some culture to the understanding. Facts have to be classified, generalizations to be made, laws to be discovered, and the connection of causes and effects to be established. The method of induction is therefore

to be employed, while the mathematical portion of the subject will furnish some exercises in exact thinking. In carrying on these processes there must not be haste, nor must too much be expected. It is not an easy thing for children to grasp many facts, to see their relations, and to keep them before their minds in order to reason upon them ; but with this caution, they should be trained to do what they can.

**II. Course of Instruction.** **1. Preparatory Course.**—This has to give geographical ideas and to awaken interest in the subject. It has been already pointed out that the neighbourhood should furnish the material of the first lessons. Those should be followed by lessons in which common things may suggest the topics. Take such objects as earthenware, articles made of iron, of tin, and such things as coal and chalk. Draw their attention to the quantities which must have come under their own notice, or to be found amongst the people where they dwell ; excite their interest as to whence they are obtained ; describe the places, point out the direction from the schoolroom, give some idea of the distance by the time it would take to walk there, and exhibit a picture, if possible, of costume and scenery. During this course, illustrate all such terms as hill, plain, valley, river, town, and the habits and employments of the people, by comparison with what comes under their observation daily. After the most important facts respecting the features, productions, and employments of England have been thus mastered, a similar plan may be pursued with other countries. Types of these countries may be found in their vegetable productions, or in their animals. The land of the palm, of the orange, or of spices ; of the lion, of the elephant, or of the camel ; of the negro or of the Arab, may be taken as instances. Specimens of productions or of manufactures, pictures of characteristic scenery or of costume, should be at hand for illustration. The directions and distances from the schoolroom should be given, the ports from which ships sail marked, and the route traced. Use the black-board and map. The lessons of this course should at first be oral, then books should be supplied, dealing with the same facts in a simple, graphic and intelligible way.

**2. Junior Course.** **(a) Use of Maps.**—Systematic teaching of geography must commence by careful instruc-

tion in the nature and use of maps. This is clearly necessary to sound progress. Maps are made up of a variety of arbitrary symbols, which of themselves convey no meaning. These symbols must be explained, and pains must be taken to keep their meaning under the pupil's attention, or there is no guarantee that the mind is gathering more than mere words. Something will have been done in previous lessons towards giving the pupils ideas of the use of the maps, wherever there has been a proper use of the black-board. An acquaintance with the modes of representing natural features, political divisions, and the sites of towns and cities will have been thus attained. (1) In giving further instruction, the first important point is to make the pupils learn about scales, and the mode of determining distances and areas. The first lesson would consist in teaching them to draw plans, of the schoolroom and premises, of various sizes; by which means they will get the idea of a scale. The next step is to draw plans of the town and neighbourhood; by which they discover, that as the area is extended, the scale is reduced. Thus proceeding to counties and countries, they at length become perfectly familiar with the mode of representing distance and area. The next step is the application of the scale in determining these points; though constant reference must be made to known dimensions, as nothing less will preserve the pupil from falling into ludicrous errors. In the course of instruction, children should be called to determine the distance between places by actual measurement on the map, and application of the scale; if a country or place is mentioned, not connected with the map before the class—*e.g.*, the equator and Europe—let one of them, by measuring, determine its position, supposing the map to be extended to that point on the same scale. Methods of approximating in a rough way to area in square miles should be pointed out. (2). The second important point is to give instruction respecting the lines of latitude and longitude, their differences, why they differ, and their several uses.

(b) **The Matter of the Lessons.**—The lessons at first must not be too formal, the purpose of filling the mind with pictures and facts must still be kept in view. In carrying out this design the method should fill in and enlarge the plan hitherto followed.

(1) **Great Britain and Ireland** have the first claim. In dealing with these the course taken should excite interest and foster intelligence. It should also lead the learner by a process of induction to see the relations between the facts brought under his notice. Thus it would be well to start off with the chief industries of the country, their localities and how they came to be established in these places. A fairly exhaustive course of this kind would bring out the general physical features, would give much historic information, and would bind by indissoluble association the main facts. For instance, with a map of the northern counties before him, the teacher would draw attention to the great population of Lancashire, pointing out the numerous towns and how close together. Then he would refer to the district as it was a century or two since. How has the change come about? The answer would deal with the physical features of the district, the neighbourhood of the Mersey, and the growth of the textile manufactures. A similar course with the woollen manufactures of the west of England and of Yorkshire would bring out not only the physical features of these districts but also some interesting historic facts. So with Ulster, or Glasgow and its neighbourhood. In dealing with the former, information would be given of the district, its chief towns and ports, and of its history; in dealing with the latter, the occupation of the people, the physical features of the country, the Clyde, and the towns and ports. The same course should be pursued with all the other industries of the country. Then the main lines of railway should be taken. Any one of them would furnish interesting geographical facts of the counties through which it passes, the towns near, the amount and character of the traffic, and the number of passengers. Following this, those portions of the country might be taken which this course has not touched or at any rate not exhausted. A brief historic outline would bring into view many interesting points. Cities and their cathedrals, counties and county towns, places with historic names, and places that have come into being under the demands of modern life, such as the watering places. The names of towns ought to be noted, and especially such endings as *ing*, *ham*, *ton*, *bury*, *wick*, *wich*, and *by*. Proceeding thus the teacher would at length direct attention

to the *coast*, its rocks, headlands, beaches, estuaries, bays, and openings of rivers ; then to maritime towns and ports, noting contrasts and all those things which have led to the decline of some and the growth of others. Such a course as this faithfully followed would prepare the children for that scientific study of the geography of their country which belongs to a later stage.

(2) **Other Lands.**—A similar plan should determine the lessons on Europe and other lands. It is utterly impossible in the junior classes to give a minute account of all countries ; but by a judicious selection of particulars the children may form intelligent conceptions of them. Let the first lessons be on the distribution and employments of the population, and the learners will not fail to associate with these the geographical facts that have determined them. When they have made some progress the plan may be enlarged. It will be found to extend their view, give vigour to their grasp, and unity to their knowledge, if classes of facts are taken, not belonging to a particular political division, but to a natural region. The writer remembers the great interest that was excited in a class upwards of thirty years since, by his taking the world in regions of 10 or 15 degrees. He took first a belt in the equatorial regions, the region of spices and palms, then the region of oranges and grapes, then of apples, and so on. Taking the degrees of latitude marking the boundaries of a region, he started eastward from the meridian of Greenwich and noted in succession the several countries and their products, their special physical features, and the characteristics, costumes, and employments of their peoples. In a course like this the children are specially interested in facts of a like kind, as well as in the contrasts ; and they attend with eagerness the history of the introduction of the product of one country of a region to another country in the same—as of spices into the West Indies, or of the products of Peru into the Eastern Hemisphere.

When the minds of the learners have been thus furnished and their powers enlarged, the teacher may attempt, in the next higher class, particular countries. When he does so he will be tempted to resort to the plan of giving dry facts. But he must resist the temptation. If he has not the means or the ability to deal with them rightly, he

may find books for his classes to read, which combine full information with graphic description. But books are at this stage a poor substitute for the living voice ; they may aid the teacher, they should not supersede him. One valuable plan would be to give them geography through history, and narratives of adventure. What geographical pictures might be formed of North America by aid of sketch maps, and the history of the taking of Quebec, and the conquest of Canada ; of the War of Independence, and of the war between the Northern and Southern States ! How Africa would become known and full of interest to the learners by following the steps of Living-stone, Stanley, and others ! What a knowledge of India would be obtained by attending the march of its conquest, or the suppression of the Mutiny ! There is not a country in Europe, there is scarcely a country in the world which might not be opened out to the learner by intelligent dealing with historic facts.

3. Senior Course.—The teacher must present clearly to his mind that his work hitherto has been preparatory. The children have been storing their minds to prepare them to enter with advantage on a scientific course. The full significance of many of the facts has not been realized, nor have their relations been fully understood. If his children remain under his instruction they must be taught to classify their knowledge and to discover and master the physical laws. (a) It will be necessary to illustrate and establish, as far as his pupils can follow, the facts that prove the form of the earth, the position of its axis, its motions, and its zones ; they must also learn how to find the latitude of a place, and the facts of longitude. On these points the children may study the introductory chapters of Sullivan's "Geography Generalized," which are admirable both in their method and as specimens of lucid exposition. (b) These things being thoroughly understood, the learner may take up systematically the geography of particular countries, beginning with his own. The facts must be investigated in their kind and in their relations. He will first take up its surface, its elevations and depressions—mountains, hills, plains, and valleys ; then its river basins, smaller streams and lakes ; and then the form and nature of its coasts. Attention will next be given to its *position* in relation to the ocean and

seas, to other lands, and to the equator, and then to its climate. These things should be followed by an exhaustive investigation of its vegetable and mineral productions, the distribution and employment of the people, and the chief seats of commerce and maritime enterprise. All through, his attention must be concentrated on the relations of these different classes of facts, and their interdependence. A similar course should be pursued with the other countries that may be taken.

#### CHAPTER IV. ENGLISH HISTORY.

**I. Should History be taught in the Common School?**—English history presents a wide field of culture. It is an account of the corporate life and actions of the nation. As such it presents to us social conditions, religious movements, political proceedings, the relations of the government to the nation, and foreign wars. It shows how the nation has become what it is. How different, to wit, is the England of to-day from the England of a thousand years ago! History traces the growth, it shows that the events in a nation's life are connected day to day, year to year, and generation to generation. It makes evident the truth, as applicable to a nation as to an individual, that the past is a power in the present, and with this will mould the future. It shows that the laws regulating human affairs are uniform, and that thus the experience of the past becomes a guide for the future, for history repeats itself. It shows what are the duties individuals owe to the state and to the laws, and it supplies motives for obedience to these. It shows how the interests of the community are inseparably bound up with the well-being of all its sections, and emphatically it confirms the statement that "it is righteousness that exalteth a nation."

**Objections Answered.**—With such a wide range as is comprehended by these and other topics, it is sometimes urged that history should have no place in the teaching of an elementary school. The objection has

been strengthened also by the way it is commonly taught, the learner getting nothing but the dry bones of history, a mere chronological skeleton. Now it is certain that some of its branches lie outside of the school, they require a knowledge of facts which the pupils cannot attain, and a power of judgment which belongs only to the mature. But this being so it does not follow that the subject should find no place in the school, it rather suggests that it should. For the objection is based on the right ground that the facts with which it deals should be gathered before judgments are formed or a philosophy of history attempted. But this may be commenced in the school, and if it is not, it is certain that the majority will not begin it after they have left school.

**Advantages.**—We may go a step further and claim a distinct advantage to the children while gathering the facts. It is quite true, that these cannot be understood in their historic bearing, unless many that have gone before and many that follow are known, yet have they a value of their own. Take an analogous case. Facts told of remarkable men as bearing on their life and character cannot be understood without a knowledge of their previous history. Are they, therefore, of no value? How then come they to be so often quoted,

“To point a moral or adorn a tale.”

Whence do Smiles's popular books draw their inspiration if not from such isolated facts? The truth is, such incidents appeal to general principles of human nature working in society, from which they derive a value apart from their connection with the individual; as, for instance, Wellington's knowledge of the condition of his soldiers, or the contention between Marlborough and Eugene, as to the different results of a firm discipline and a lenient laxity. Even in junior classes, many facts, by exciting the imagination, appeal to feelings of horror of cruelty, detestation of evil, or admiration of goodness and virtue, and so have a moral value. Nay, often a moral truth gains by their means a significance which it would never have had in a preceptive form—the incident has been as a sunbeam disclosing the truth, as that of Sir Philip Sidney at Zutphen.

**II. Purpose to be served in Teaching History.**  
**1. Topics.**—Our aim in teaching history will determine our

selection of topics. What then can we hope to do? What culture may we expect to secure? We have just seen that all we can hope to do is to lay the foundation for its later study; but in doing this we may accomplish several important things. We may secure a valuable training of the intellect. History offers a good field of culture for the memory; it furnishes material to theceptive and imaginative powers; it offers the means, in its large array of facts of like and diverse kinds, for the culture of the understanding; it calls the judgment into play in examining evidence and weighing testimony; and it secures some discipline to the reason in tracing cause and effect, estimating probabilities and discovering truth. But while a right method will secure such benefits as these, we venture to think that its chief sphere in school should be in moral training. Such topics should be selected as will exercise the moral sense, as will suggest principles of right conduct, and as will inspire with thankfulness for the heritage won for us by our fathers. Rightly taught, it will bring into judgment the principles and actions of men of like passions as ourselves; it will show and enforce the necessity of right habits, good character, and skilled industry; and it will awaken a desire and determination that the heritage shall be improved and not injured by us.

**2. Sources of Danger.**—In prosecuting these aims there are sources of danger, respecting which the teacher must be on his guard. There is the danger of the imagination warping the facts; there is the danger of the feelings and passions prejudicing the judgment; there is the danger of hasty inference, and that of giving opinions rather than facts. In reading history the teacher will remember that his authors were exposed to the same influences. He should note that much of their writing is opinion—very valuable it may be, yet not history. He should read also with charity and consideration, avoiding conceit and positiveness. He must remember that we never know all the facts, many have never been recorded. Motives too are entirely hidden; we may make shrewd guesses at them, but we can never be certain that we know them. Hence a distinguished statesman is credited with the saying, “History! I know that to be a lie!” Now, if such be the case with great authors, how much more with books for children! In these, no writer can deal with all

parts of his subject. He must omit some things, he must treat others scantily ; and even where he deals more fully, he cannot always be sure that he does not omit something, which, if given, would alter the entire complexion of his story. The teacher should remember also that from the influence of prejudice many of the things recorded are worthless. For instance, it is ever a practice with party to contend that the *right* is with them if the people are. But how fickle is popular opinion ! How variable is popular action ! How often have the same people thrown from the pedestal on which they had placed him the idol of an hour ! "A million of fools," says Taine, "do not make one wise man." The few are noble. The teacher must ever keep in view that his object is to get all the facts, in order that the children may be prepared to form right judgments on them.

**III. Method of Teaching History.**—The method is indicated by the aims. Facts are to be given, real and life-like ; inferences are to be drawn ; and principles are to be established. Hence, picturing out, training and induction must form the chief features of the method. Picturing out makes the dead past a living present. It clothes the people with flesh and blood, and makes them to live and move before our eyes. Training uses the knowledge which such teaching supplies, so that the mind of the learner is developing in power. It does this in such a way that at every step he is not only actively engaged on what he receives so that it may become his own, but that he may get out of it things not given. Induction thus comes into use. The learner has to deal with the facts so as to obtain, as far as he can, the laws which underlie them, and also principles for his guidance. Here is the difficulty. "Physicians tell us that there is a great deal of difference between taking a medicine, and the medicine getting into our constitution." There is a similar difference betwixt putting historical facts in the memory and giving the educated truths a power over the conduct. This cannot be unless the lessons they supply enter into the ordinary train of thought and feeling, that train which determines what the character is, or fixes what it will become.

The Course of Instruction will be determined by these aims. There can be no realization of the past, nor any just inferences drawn, unless the pupil has some know-

ledge of the present. He must be able to compare what he hears with what he knows. He must be guided into realizing the things in which the past differs from the present as well as those in which they are alike. When children have realized that those of whom they hear or read actually lived and moved, they will unconsciously place them in circumstances similar to the present. Their present knowledge will colour the past, and so prevent them realizing its truth. They will be apt to think of people hundreds of years ago as having the same knowledge and advantages as ourselves. This will show to the teacher the necessity of making real the past by a right use of the present. One source of mistake may be indicated as a sample of others. Accustomed to hear of the millions now in the country, of thronged towns and thriving neighbourhoods, the pupil imagines it was the same in the past. This illusion must be dispelled. When reading of the earlier periods, he must realize the scant population, the wide wastes, and the vast solitudes, where now there are busy folk.

**Moral Purpose.**—As the purpose is essentially moral, those topics must be selected which appeal to his sympathies. These will not be found in a history of kings and their deeds, nor in narratives of foreign war, but in a history of the people. How they lived, in what houses, on what food, by what employments. How they dressed, indoor and out-door life, and popular games. The relations between the classes of the community, modes of salutation, relations of employers and employed, trade guilds and clubs. The roads and the water-ways, and the religious and educational movements and progress.

**Incidental Lessons.**—Much of the instruction will be incidental. Lessons in geography will furnish opportunities. The names and sites of manor houses, hamlets, villages, towns, cathedrals, castles and families, properly treated, will help to vivid realization of the past. Reading lessons will give others in allusions to celebrated persons, places, or events; and in forms of expression involving historic facts as to the sources of the language, or to the influence on it of the Celt, the Dane, the Norman, the ecclesiastic or the scholar. Such incidental teaching should be aided by books on similar lines.

Systematic Reading can be pursued with profit when

the children have possessed themselves of pictures of the past. The teacher will have to be judicious in his choice of a plan and of books. The life of the nation has several marked eras. Each epoch should be taken in order, and its main facts, questions, and characteristics mastered before proceeding to the next. Such a book as Creighton's "Epochs of History" would be found suitable. The method of using such a book has been already indicated in the section on exposition of class subjects.

**Chronology.**—The position which the learning of dates should occupy may be briefly stated. Long lists of dates and events, which serve no useful purpose, are excluded by the method recommended. But some dates must be given, or "there will be a grotesque confusion of the incidents in the child's memory." The dates needed in the earlier lessons will be few, and as a rule, will fix themselves in the mind by their association with the things given. But in systematic teaching more will be required, though even here chief reliance should be placed on an intelligent acquaintance with the sequence of events. At first the dates marking the several epochs should be fixed, and thus a framework formed in which to set the main facts of each period. These dates should be frequently required until they come as readily as the alphabet does. When commencing a lesson the same plan should be followed, and dates given which will assign the facts to their proper period. In going through an epoch, the dates which are of most importance to an intelligent knowledge of it should be fixed in right sequence. As the learners make progress, advantage should be taken of similar incidents and questions to fix dates as well as to show how the nation grew. Thus as each point is reached a back reference to the reigns of Henry III., Edward II., Richard II., Henry IV., Charles I., and James II., will not only permanently fix many special dates, but will put the learner in possession of the history of several important questions. In the same way by linking dates a century apart, as the learners pass on, many events will be associated with them, and will help to bring into prominence the progress made. How suggestive, for instance, is the following list:—  
671 Egfrid and the Picts. 771 Offa and Kent. 871 Alfred at Ashdown and Wilton. 971 Edgar grants Lothian to Scotland. 1071 Hereward in Ely. 1171 Henry II. to

Ireland. 1271 Edward at Nazareth. 1371 Robert, first of the Stuarts. 1471 Battle of Tewkesbury. 1571 Incorporation of Oxford and Cambridge. 1671 Colonel Blood and the regalia. 1771 English Newspapers. 1871 Ballot Act.

## CHAPTER V.

### ELEMENTARY KNOWLEDGE OF NATURE.

**I. Infants' School Course.** 1. **Kindergarten.**—The early education of a child to a very great degree is from its contact with nature. Its first knowledge is through its senses. This is usually without design on its own part, and is in a desultory way ; but how effective ! Brougham once expressed a conviction that he learned thus in the first three years of his life, more than in all the rest. When a child enters school it is that he may receive the benefit of others' experience, but if his teachers are wise, they will still proceed on the same lines, and "follow nature" will be their guide and end. Such exercises as those included under the term *Kindergarten*, will at first and for a considerable time form the employment in school. One advantage of this will be that starting with the freedom and *abandon* of the child face to face with nature, they will be gradually moulded by the school instinct, and without losing their special characteristics, become slightly more formal, and more and more an adaptation of means to ends.

2. **Object Lessons.**—The active curiosity of children respecting the things they see, and the operations going on around them, as shown in their questions ; and the experiments they make on toys and other things, by which they become acquainted with their parts and qualities, are reasons for combining with other exercises, lessons on objects. In doing this we must still follow nature. Then, at first, the objects will be few, and will be dealt with until they are perfectly familiar ; and then with growing power there would be provision for a wider range. They would also seem to be selected capriciously, and would only by degrees fall into something like order, each having a definite purpose, and being carried forward on a definite plan.

On the method of these lessons depends their value. "Object lessons," says Sir F. R. Sandford, "are valuable for the intelligent habits of observation and discrimination which they produce, rather than for the amount of knowledge inculcated." Handling and examining the objects are the necessary elements of this process. Thus their attention is directed to qualities, and to similar qualities in various objects. When a quality is perceived it is *named*. But now the teacher's difficulties begin. He may give the name before the perception is *clear*; or, should he escape from this, he may fall into the no less fatal mistake that the name explains the thing. He must avoid both. He must remember that these lessons are not on words, but on things: that the lesson is not successful when a word is said, but when a thing is seen. Hence he must not be forward to give words. He is even now laying the basis of habit, and on his present course depends greatly the child's future success. He is teaching to observe, to examine, to experiment, and to reflect. Having secured these, he will give attention to language. Not to words only, but to description, simple yet full—the fuller the better. Then language will help the child to realize what it was doing.

In the above, experiment has been indicated as one of the steps in the course. It is a very important one. But let not the teacher be misled by a word. There is nothing very difficult intended. When a glass is struck to produce a sound, or when it is struck to produce a fracture, and the same thing is done with slate to compare the fractures, we have experiments. So also when coal is placed in the bowl of a pipe, covered with clay, placed in the fire, and flame applied at the end of the stem; or when a few grains of cochineal are dropped into water, or lump sugar placed in the flame of a candle. In all such cases, experiment gives opportunity for observing, or discloses qualities otherwise hidden.

**II. First Grade, or Elementary School.** 1. Should the Sciences be taught in it?—The habit of observing natural phenomena, of reflecting on the facts, of inquiring into causes, and of pursuing those experimental processes to which we owe science, should form a part of early training. But it should be clearly understood what can be properly claimed from the first grade.

school in this matter. The elementary school is not the place to teach the sciences. Its very name shows so much. Its main work, at first, is to secure to the pupils the instruments of learning, and when these are acquired, to instruct them how to apply them in gathering knowledge for themselves. In pursuing the latter, care has to be taken that the subjects are within their reach. But this can scarcely be claimed for many of the sciences. Their mental powers and the paucity of their knowledge, unfit young learners for the study of these, with real advantage to themselves. Hence, it has been matter of common remark that attempts to do so have only placed in the mind unintelligible facts, or in the mouth scientific jargon.

**2. Basis of Scientific Habit.** — Holding the above position to be sound, yet it may be maintained, that all through the learners' course in the elementary school, there may run alongside of its proper work such teaching as will prepare them to enter intelligently into these studies later on ; or that will send them forth better fitted for industrial pursuits. The thing has been done. In many schools, before the panic produced by the "Lowe Code," it was the custom to give, with success, lessons on natural objects, lessons on things which exemplify natural laws, and lessons in the elements of natural philosophy.

The aim in such a course was not thought to be attained when the pupil had the facts. However valuable such knowledge, the purpose was not so much to convey knowledge as to form a habit. The test applied was not how much was carried away, but how much the pupil had done, and in what way. The purpose was not only to give knowledge that could be measured, but especially to give the desire, the ways and the aptitude of obtaining it.

Such an aim can be accomplished only by a gradual development, during the whole school period, of those habits of mind on which success depends. For instance, children may be trained to observe, and to form the habit of doing so ; they may be shown how to gather facts by comparison and experiment ; they may be taught how to handle the facts, to seek their explanation, and to classify them ; and generally they may be so instructed as to learn how to pursue an investigation till they have discovered a law or established a principle. So much may be claimed

as within their power, and also as their right. To those who do not pass on to schools of the *second grade*, such training would be invaluable as a preparation for their future life as artisans.

3. **Method.**—On coming into the *first grade* school, the development and culture should be conducted on a systematic plan. Not systematic in the sense of giving attention to special subjects, but *systematic in method*. This should be uniform in calling into play the same faculties, and in gradually enlarging their sphere. It should call forth *active* observation, that is, observation with an end in view. It should accustom the learner to bring all his senses into action, handling, seeing, hearing, smelling, and tasting. It should secure attention to qualities so common as to escape notice, and by experiment qualities which are concealed. Having a purpose in view, the learner must be led to think that some qualities that are obvious must depend on others that are not so. How discover these? Appeal is thus made to a higher faculty, and he must then be stimulated to seek for causes. In carrying out this aim in the juvenile school, the teaching must at first be altogether oral; then when power is gained and independent work is possible, books may be added. These would be of two kinds: a first book dealing mainly with things, and a higher book on natural philosophy. Thus we have three stages: a preparatory, middle, and advanced.

4. **Preliminary Stage.—Natural Objects.** (a) **Minerals.**—Familiar objects should be chosen, such as clay, slate, chalk, flint, and coal; and such as enter into the construction of articles in the home, as lead, iron, tin, zinc, and copper. These offer facts for experiment, and suggest questions as to causes. Take coal for instance. Direct the attention of the children to the flame they see in the fire. How is it produced? What is the agent? These questions elicit conjectures. Then the teacher proceeds by experiment to test their likelihood. Gradually he leads the children to see that flame is ignited gas, and that the gas is set free by heat. Proceeding, he leads the children to suggest that the gas could be set free and collected, and then he verifies the suggestion by actual experiment.

(b) **Plants.**—A step will be taken upwards towards the accomplishment of the purpose, when the lessons are

extended to a few common plants. These lessons may be in an ascending series. The varieties of form and colour ; the development and protection of buds ; the arrangement of the leaves on stems, and of the sepals and petals in whorls ; the position assumed by the pistil when it is longer than the stamens ; and the adaptation of the stalk to the weight of the flower—are points calculated to quicken observation, and to lead to accurate discrimination. Advancing, a still higher exercise will be found in the relations of the several parts, and in the facts disclosed by dissection. The functions of the parts will give opportunity for inductive processes, of a not too difficult kind. For instance, a lesson comparing the root and stem of any common plant might lead to the discovery of the influence of the presence or absence of light on the parts. Another on the arrangements of leaves and whorls might lead to the discovery of the laws of the arrangements. Other inductive lessons would be carried on, when examining the influence of leaves on the life of the plant, on their relation to light, on what they inhale and exhale, and on the differences in the leaves of aquatic plants. An illustration of the method may be obtained by an examination of a plant so as to answer the question, “How does it grow ?” Here the very question gives a purpose to the observation. Then parts are noted which bring up questions, “How is this ? What is its cause ? What is the object ?” Seeking for answers, there would be a resort to experiment, to a wider field of observation, and to a comparison of plants in varying circumstances. Thus the lesson would proceed, gathering facts, correcting fancies and errors, until at length an approximate answer is obtained.

(c) **Animals.**—Lessons on animals which may be seen daily, followed by others on those seen occasionally, or about which they can read, may be made very serviceable to the pupils, in the training now contemplated. The facts offered are very numerous and are well fitted to bring out power of *discrimination*. Many facts and relations, as instincts, habits, and modes of getting food, offer the means of exercising *conception* and *fancy*, powers which play an important part in the study of nature. Then the adaptations which may be traced of structure to habits, situation, and food, present interesting groups of

facts for the cultivation of *judgment*. For this, instances of a simple kind may be found in the fitness of the coverings of the cow, sheep, and goat to their habitats and habits ; in the arrangement of the feathers of birds and the scales of fish, and in the adaptation of the forms of both to their movements, and the resistance to be overcome. A step onward will demand more vigorous effort, and will bring into view a wider field of contrivance and design. The *law of compensation*, so frequently presenting itself, may be worked out in many instances ; starting from such easy ones as the elephant's trunk, the spider's web, and the lion-ant's home. Advancing, opportunities will arise in which to give *elementary notions in mechanics*, as when comparing the neck and head of the cow with the head of the elephant, or when speaking of raising the arm or lifting the foot. Then as the mind gains power *identification of principle* in structure and design between animals in other respects very dissimilar may crown and reward the labours of the pupil.

5. **Middle Stage.—Common Things.—Facts, Processes, and Principles.**—Children, who have had their powers of observation sharpened, their powers of discrimination quickened, and who have been put on the right track of investigation, will be prepared, as they advance in school, for more difficult work. Such a course of lessons should await them, as would awaken an intelligent interest in the employments going on around them ; in the modes of producing things with which they are familiar, and which will put them in possession of the natural laws and principles thus exemplified. At the same time, their stage of mental growth demands that they should be trained to more independent effort ; while their further progress will very materially depend on their minds being well stored, and on these stores being ready at command. Three things, then, will now have to be kept in view. The pupil is still to be trained in the method of questioning nature, he has to lay up in store knowledge of many things, and he has to work somewhat more independently. The latter will require that a book on a good method, dealing with the things he has to learn, shall be placed in his hands. But the first cannot be abandoned. Books give only the results of research. The oral lesson must still lead the pupil on right tracks. But this lesson may be found in-

sufficient to supply all that should be known, and the facts cannot be given with sufficient frequency to make a permanent impression. Books, then, will be a necessary and valuable adjunct. When they are introduced it will be important to consider how they may be used to the best advantage. The oral lesson will give right method, and will familiarize the learner with its application, and will thus preserve him from taking the statements of the book on trust. Then by running comment during the preparation, followed by an examination to test the understanding of what has been prepared, the teacher may secure that the knowledge is more than verbal. This would prepare the way for a lesson on what has been read, accompanied by illustrations and experiments, so that the learners may associate all the facts with their causes and principles.

The method of the oral lesson must proceed on the lines which have been indicated. The following summary by Fletcher sufficiently sets them forth:—"There should be *observation*, aided by analysis and experiment; *comparison*, followed by *induction*; *reasoning*, by analogy or *deduction*; and *hypothesis*, which, rightly used, as a light derived from things known, to lead the other faculties to the discovery of the unknown, is the parent of invention. Observation and experiment would be led by hypothesis, and even when it is impossible to submit the object to the senses of the children, but necessary only to tell them the result of the observations and experiments of others, this will never be well digested and assimilated unless hypothesis have given a zest for it. Unless the mind has been brought to ask a question, the answer will not be properly stored in its recesses; and, in over haste to convey information, not nearly so much will be assimilated as if all the faculties of the mind, in an apparently slower course, had been brought into operation to acquire it."

6. Advanced Stage.—Natural Phenomena and Natural Laws.—Learners who pass through the preceding stages into the advanced classes of the school will be prepared to proceed in a more definite course of natural science. But this term embraces a very spacious field. How much of it can be cultivated? Time is limited, school life is drawing to its close. How best utilize what remains? The answer seems to be, by a judicious selection of topics from natural phenomena, and from common

things which exemplify natural laws. The properties of air and water may be taken as instances of the former ; the laws exemplified in a tea-pot, a burning candle, a fire, and a common pump, the latter. Several reasons may be assigned for such a selection. In fixing any subject as a part of school work, two things should be considered : how much the teacher must give, and how much the learner must acquire for himself ; or, to put the latter point in another way, how much he can do at home, and how far he can pursue it when school life is over. Now, for some branches of science he would depend altogether on his teacher. His home is too small and his means are too cramped, to admit the possibility while he is a pupil, or the hope when he has ceased to be one, of doing anything at home. Again, there must be design in making so much of early education to depend on contact with natural phenomena. Is it not, that here and in this way, he has to possess himself of those laws and principles which do not belong to a special subject, but have to do with all his life ? Then, again, in order to teach any science well, the teacher must not only be fully master of it, but have a very extensive acquaintance with related sciences, as well as a comprehensive knowledge of general laws and principles. For "no tyro can teach well even the elements of science," and much less can he, whose knowledge of it may be no more than he has gained from some trashy epitome, by means of which he has managed to scramble through an examination. At present the preparation of the teacher of an elementary school does not give proficiency in science.

To utilize the limited time well, the teacher must steadily hold to the right method. Herschell says, "Scientific method tends to cure the mind of its tendency to rush to conclusions, of its tendency to place the end above the means, whereas a right habit of mind is of more value than any amount of knowledge whatever." The teacher should well weigh these words. He must resist the temptation to use the minds of his children as cisterns into which he has to pump information, or as sponges which he has to fill and squeeze. A merely expository method is out of place. The pupil has not to see through other people's eyes, but to use his own. In some subjects he must take from others, but here, within the limits contemplated, he has the means of independent work— such work as will not only

give mental power, but the right way of using it in the investigation of nature and its laws. In favour of such knowledge combined with such a method, a high authority has said, "It has a high value in itself, and affords the best discipline to the mind. Here the distinction between forming and informing the mind is lost, for while you do this you secure that." But when results only are given, the pupil will only seem to know, and will be mentally impotent.

**7. Summary of Method.**—It has been said, "The teacher will succeed best whose thought is given to how he may excite such thought as was given by the original investigator and discoverer." This gives us the aim and the method in a nutshell. Proceeding thus there will be *observation* and *investigation* aided by *analysis* and *experiment*. Then when some fact or phenomenon is *clear*, the next step will be to seek its *explanation*, that is to discover its *cause*. This will call forth *imagination*, "without which," says Tyndall, "not a step can be taken into the region of causes and principles." This will give birth to a *supposition* or *hypothesis*, which will then be subjected to the test of experiment and the accumulation of instances, until the mind is satisfied that it offers a complete explanation of all the phenomena. This yields *induction* and the statement of the *law*, which is a statement in words of what will happen in certain cases. An ultimate fact being thus reached, we gain the means of *classification*, and such facts become grounds of reasoning like axioms in geometry. Thus the way is prepared for *deduction*, either as a means of *verification* or as an instrument of further *discovery*. An instance of the latter may be cited. When the principle of gravitation was established, it became the means of discovery that the earth is not an exact sphere.

Let no teacher be frightened by this sketch. It is not so formidable as it appears. All that is required is, that it shall be applied to subjects within the grasp of children. De Morgan says, "One reason for such instruction is that its methods and reasoning are better adapted to the juvenile mind than in subjects of a more formal kind. It has also a moral advantage. Pursued by right methods, the pupil learns that he must acquire all the facts, and acquire them truthfully, before forming a judgment. He also has a truthful connection between the facts and their

expression." Let me recommend to young teachers Arnot's "Elements of Physics" as an admirable exposition of the subjects for the advanced stage ; and for use in the classes, "Natural Philosophy," by the Scottish School Book Association. Reference also may be made to the author's "Art of Training Young Minds to Observe and Think," fully illustrated by 146 notes of Lessons.

## CHAPTER VI

### SCRIPTURAL INSTRUCTION.

**Use of the Bible in School.**—The *use* of the Holy Scriptures in schools ought to be clearly understood. It is a book whose aim is to bring back man to God : it exhibits a plan whereby he may be saved ; it points him to a Saviour ; hence it is of infinite importance that the lessons connected therewith should be conducted with reverence. It should not be employed as a common lesson book, to teach the elements of reading, spelling, or grammar, as many evils result from such practice ; not the least of which is the distaste which makes it a sealed book in later life, arising from the associations with its earlier use. It would be well to distinguish Scripture teaching by greater seriousness, and by not resorting to those devices for correction and competition adopted in other lessons.

**I. 1. Religious Instruction by Bible Lessons.**—The facts, doctrines, and precepts of Holy Scripture *must be lodged in the memory* of our children. The value of such an acquaintance cannot be too highly estimated, yet such knowledge in itself is not sanctifying ; the experience of many a schoolmaster corroborating the assertion of Inspector Symons,—"It is very common to find children who have a perfect knowledge of, at least, the cardinal means of salvation, and all the leading truths and doctrines of Scripture, and yet who turn out dissolute and depraved, and very frequently worse than those who have been left in ignorance." The only remedy in a teacher's power for such a condition as this, is to add to scriptural instruction moral and religious training, by means of collective Bible

lessons, in which the truth must be made to affect the heart and quicken the conscience, and by everything in the government of the school being referred to the teaching and authority of the word of God.

**2. Scripture Reading—its Difficulties.**—Scripture reading presents difficulties of a very different character from those of ordinary text-books: here the difficulty arises from the language being unknown, but in the case of Scripture it grows out of its very familiarity. The phraseology of Scripture is so familiar in itself, and, by frequent repetition, is so familiar to the ear, that its most important statements fail to arrest the attention, its most pathetic stories to affect the heart, and its most momentous truths to alarm the conscience. Now this difficulty, if the teacher would be successful, must be overcome; and we know no better plan of doing so than that proposed by Jacob Abbott as “picturing to the imagination the scenes described,” and brought greatly into prominence in this country, as the “picturing out” method, by Mr. Stow; this gentleman proposing that the teacher shall do for the children what Mr. Abbott would have them taught to do for themselves.

**3. Scripture Reading—Narrative.**—In selecting a Scripture narrative, care should be taken that the portion allotted for one lesson should be distinct in itself, and short enough to be thoroughly mastered in the time. Many of the incidents of Scripture will be found to contain just enough of matter for one lesson; but there is great advantage in having a narrative that will last several lessons; but the evil to be avoided is that of attempting in one lesson more than can be taught with success. In conducting the lesson, the portion might be read verse about until it has been read several times. Then the teacher should interrogate the class on the facts and language, and such explanations should be educed as may be found necessary to the complete apprehension of them. When the children have hold of the thread of the narrative, and a fair grasp of the meaning of its allusions and terms, the teacher should proceed to unfold and apply its lesson. At this stage of the lesson the teacher should bring out, and place in the clearest light, the truth which the narrative illustrates. He should avoid dwelling on minute and unimportant particulars, but should seize and

impress the most prominent topics. He should be careful to preserve the unity of the lesson, and admit nothing into it which would divert attention from its chief purpose. At the close of the teaching he should ask for the truth which the lesson had unfolded, and the ability to state this truth should be the test of his success. Having obtained it, he should close with a short but emphatic application. His success will depend chiefly on his methods. He should base his questions, as much as possible, on the answers received ; he should not tell his various points, but should lead his children to discover them. He should be prepared with collateral passages, the bearing of which on his subject should be made clearly out ; and he should have ready familiar illustrations, that will aid the children in picturing the scene to themselves.

**II. Study of the Bible.**—But we must have a higher aim in Scripture reading than the communication of scriptural knowledge. The Bible is a book of peculiar structure ; its truths, even the most important and momentous, are interwoven with history, narrative, biography, prophecy, and precept. In this there must be design. The incidents and stories excite our interest, and serve to fix the truth in our minds ; but a full view of the truth can only be obtained by carefully culling its different parts from the other things with which they are mingled. Hence the Scriptures should be studied ; and this appears to be the design of God in making the Bible the sort of book it is. To communicate Scripture knowledge is important ; but to teach a child how to study the Bible for itself is greatly more so.

**1. Its own Interpreter.**—As the first step, the children should be taught to explain Scripture by Scripture, and thus make it its own interpreter. In order to fix the sense in which words or phrases are used other passages where they occur ought to be sought, and, from an examination of these, their import educated. But this principle admits of a more extended application than to the mere elucidation of Scripture phrases. Suppose, for instance, that the precept occurs, “Pray for them that despitefully use you and persecute you.” What illustration could point and fix it so well as the examples of Stephen and of our Lord ?

**2. Collation.**—Another mode of interesting children

in the study of the Holy Scriptures is to compare different narratives of the same transaction. This not only ensures a fuller acquaintance with the truth, but, as seeming contradictions frequently present themselves, the solution of which does not lie on the surface, an exercise is thereby secured as valuable for its moral as for its mental results. Let any teacher who has not tried the plan take the accounts of our Saviour's birth, and the events connected therewith, as recorded by Matthew and by Luke. Let him get the children to arrange the facts found in the two evangelists, and he will soon find his class most absorbingly interested in the elucidation of the difficulty presented by the statement of Matthew, that Jesus was taken to Egypt, and that of Luke, which represents him as taken from Bethlehem to Jerusalem, and from Jerusalem to Nazareth. Not to mention that its right solution will explain the seeming anomaly, when comp. red with the principle of Divine Providence, as shown in other instances, "that the star which they saw in the east went before them, till it came and stood over where the young child was." Compare John xi. 39—44 verses.

3. **Doctrines.**—Of other plans of interesting children in the study of the Scriptures which might be named, we shall only notice one, very well adapted for the higher classes, and as a home exercise for revision on Monday morning. It is that of causing the children to collect and arrange the various teachings of Scripture on a given subject—gathering to a focus the scattered rays of truth. The doctrines, institutions, and prophecies are well adapted to this exercise. In conclusion, let the children find and read all the passages to which it may be necessary to refer.

A fuller exposition of the principles and methods of scriptural instruction will be found in the author's "Art of Religious Instruction," fully illustrated by 162 notes and sketches of Bible lessons.

## PART IV.—APPENDIX.

## I. ABSTRACT OF THE SCHEME OF THE SCHOOL BOARD FOR LONDON FOR OBJECT TEACHING.

I. Infants' School.—1. *Aim.*—To develop in the children's minds an interest in the things around them: to teach the use of all the senses, and form habits of observation; to impart a correct knowledge of the commonest things; to increase the infants' vocabulary and power of expressing themselves. 2. *Subjects and means of instruction.*—A few objects should be selected from each of the following groups:—(a) *Domestic group.*—The schoolroom itself, with door, chair, table, desk, fire-place, and clock. The child's coat, cloak, frock, cap, shawl, and boots. Pins, needles, knife, bell, and kettle; to which may be added any common utensils. (b) *Animal group.*—First in importance comes the child itself, afterwards the cat, dog, horse, cow, sheep, cock and hen, sparrow, herring, fly, beetle; to which may be added any other familiar animals, such as donkey, rabbit, mouse, goose, canary, lark, pigeon, shrimp, crab, lobster, sole, plaice, spider, butterfly, bee, periwinkle, oyster, earth-worm, &c. The parts of animals may form the subjects of lessons, such as head, hand, foot, paw, eye, ear, nose, mouth, hair, feathers, wool, &c. (c) *Plant group.*—The choice will depend upon the season of the year, and should include the nearest trees, and such smaller plants as are accessible, as the primrose, violet, daisy, crocus, dandelion, wallflower, hyacinth, geranium, fuchsia, and holly; cabbage, pea, bean, potato, onion, carrot, turnip, wheat, barley, oats. The parts of plants may also form subjects of lessons, as the wood, bark, leaves, flowers, seed, root, stem, &c., or special products, as apples, nuts, starch, sugar, gum. Attention should also be drawn to the simpler

phenomena of vegetable growth, by means of actual observation, or experiment. (d) *Mineral group*.—This should include any accessible stone, with chalk, sand, blacklead, and water, together with iron, brick, clay, glass, sulphur, &c.

**II. Elementary (First Grade) School, Standard I.**—1. *Aim*.—To carry on the previous training, leading also to the exercise of the judgment, in showing the relations of the different parts of bodies and how their different qualities fit them for the uses to which they are applied. 2. *Subjects and means of instruction*. The list of objects under the four groups may be somewhat extended, especially in the Natural History lessons; in which foreign animals and plants, such as elephant, bear, whale, lion, eagle, crocodile, coral, sponge, palm tree, orange tree, tea plant, coffee plant, and vegetable products, such as rice, arrowroot, sago, tapioca, olive oil, cocoa nut, raisins, currants, figs, pepper, ginger, mustard, and caraway seeds, may be occasionally introduced. Opportunity may be taken of bright sunshine, black clouds, fog, heavy showers of hail, rain, or snow, stormy wind, a rainbow, or a thunder-storm, to draw attention to these meteorological phenomena. A few interesting lessons may also be given by experiments on water, illustrating the solid, liquid, and gaseous conditions of the same substance; on wax, solder, camphor, &c., illustrative of melting, boiling, condensing, freezing, or subliming; or on sugar, salt, alum, sulphate of copper, &c., illustrative of the processes of dissolving, and regaining the same substance by evaporation or crystallization. These lessons should be made as synthetic as possible, and should be carefully graduated, the earlier ones preparing the ground for the later ones.

**Standards II. and III**—1. *The aim*. To lead up from the previous to "Code" subjects. The teaching must be more advanced, and make a larger demand on the thinking powers of the children. 2. *Subjects and means of instruction*. Series of objects illustrating the most important manufactures. Geographical distribution of principal products and means of procuring them. Objects for teaching the fundamental notions of matter and force. (a) In the animal group the children should be led to compare and classify the different animals, and to notice the chief differences and resemblances between the leading

divisions of the animal kingdom ; and the preparation, qualities, and uses of such things as leather, silk, wool, and horn, should be explained to them. (b) In the vegetable group such distinction as that of endogen and exogen should be made clear ; the gradual growth of plants, such as beans and wheat, should be traced ; the uses of such substances as cotton, linen, starch, sugar, coffee, tea, and india-rubber, with the processes of manufacture, should be explained. (c) In the mineral group attention should be called to the general properties of metals and the qualities peculiar to each. The iron and steel manufactures, and the making of bricks, earthenware, glass, &c., may be explained ; and the distillation of coal and manufacture of gas, may be experimentally illustrated.

Standards IV. to VI.—Besides the "Code" subjects it will be necessary to continue the training just described. Lessons on the principles which are at the foundation of all physical, mechanical, and chemical science should be given, during which clear notions should be given on specific gravity, the laws of motion, of solids, liquids, and gaseous bodies, and the production, radiation, conduction, and absorption of heat. Occasional lessons should be given on the atmosphere, and on the ordinary meteorological changes. The children should be taught something of the laws of health.

(Such a book as Professor Guthrie's "First Book of Knowledge" might be used as a reading book in connection with such a course as the above. See also the "Art of Teaching Young Minds to Observe and Think.")

## APPENDIX II.

### MASTERS AND SUBORDINATES.

THE efficiency of a school very much depends on the subordinate teachers, whether assistants, pupil teachers, or monitors ; on their fitness, subordination, diligence, and spirit ; these also materially depend on the power of the master to influence them, and on his tact in supervising them. A few considerations are here offered on the relations and duties thus involved.

**I. Assistant Teachers.**—Assistants are of two classes, such as have been to college, and those that have not had that privilege. In the case of the former, the master may require much tact to get them to work out his principles and plans, without undue interference with their freedom. There must be uniformity of system, all parts of the school work must dovetail, and hence it is necessary that there should be oneness of principle ; but within these necessary limits the assistant should be free. At the same time the assistant must remember that he is not isolated, and cannot be independent. He must learn to regard all the departments as parts of an organic whole, the health of which depends on its being animated by one soul, moved by one heart, and governed by one head. The other class will be more amenable to discipline and will require more supervision. The value of their work will be much influenced by their reading and their professional studies. The master should give them the benefit of his experience and friendly advice. They ought to read such books as will free them from those narrow habits of mind which the use of meagre text-books fosters ; and they should study those subjects which bear immediately on their professional success, as Physiology, Psychology, Logic, and Ethics.

**II. Pupil Teachers.**—The relation of master and pupil teacher involves reciprocal duties and benefits. Of these clear conceptions should be formed.

**1. Pupil Teacher's Work.**—He is an apprentice to the profession of schoolmaster ; hence his work must embrace all that is requisite to fit him to discharge its duties efficiently. He should learn his profession after the usual fashion of apprenticeship. At first a few easy things, then more difficult ones as he acquires skill, and at length those which require in him, temper, ability, and judgment.

•(a) **Training as a Teacher.**—This is the first thing. It must not be haphazard, but on system. He must have a definite course of work, and its principles and methods must be carefully explained ; he must have the benefit of exemplar teaching from the master, and his work must be carefully superintended and minutely criticised. The first efforts of the master should be thus directed. He should teach him to drill and manage a class

and keep it attentive and active in those mechanical matters which will at first fall to his share. Then his work should be carefully graduated, and he should be stimulated to throw into it, even into the most mechanical, all his intelligence and mental power. As soon as possible, he should be trained in collective teaching, as this requires sustained effort of thought, and the use of many devices to sustain attention, and to secure reception of the subject. His work properly graduated would include lessons on natural objects ; examination and exposition of reading ; lessons in geography, arithmetic, and grammar ; and in his latter time history, scientific principles, and moral duties.

To save him from desultory habits and hasty preparation, he should have supplied to him a syllabus of the subjects he has to teach, and a definite portion marked thereon, at least monthly.

(b) **Training in School Management.**—The pupil teacher should relieve the master from the necessity of attending to things that would interfere with the higher functions of his office. The condition of the ink-wells, slates, and black-boards, and the general tidiness of the school-room and presses should be committed to him. He should be charged with the apparatus for ventilation and with attention to the fires. When he may be so trusted, he should set copies, examine home lessons, and mark the registers, and he should supply the master each half-day with a list of the absentees. Towards the middle of his apprenticeship his attention should be directed to the management of the school. At first it would be enough to give him the occasional oversight of its order. Here he should check disorder by signs, and he should see that such positions are maintained as are healthy and agreeable. As he acquires skill and power of self-control, he may be entrusted with the drill, and ultimately with the changing of lessons.

2. **Pupil Teacher's Studies.**—In arranging and directing his studies two things have to be sought :—The filling and discipline of his mind, and the formation of his professional character. To send him forth rightly equipped for his work, his studies should not be confined to the subjects in which he has to be examined. Convinced that a richly-stored mind and a well-disciplined intellect will

best further his purpose, the master should secure a fairly wide range of reading, pursued on such methods as promote vigorous thought and patient research.

(a) **Text-books and Instruction.**—The instruction should be based on good text-books, and should consist of searching examination, combined with such explanation as may be needed. But, in addition, the master should give, at least once weekly, a lesson independent of a text-book, which should be to his pupil an example of a full and thoughtful investigation of some topic connected with his studies.

(b) **Work and Time**—Considering the pressure of school work on the energies both of body and mind, the amount of daily work should not be more than can be done with safety and ease. Some masters give so much to be done that the only result to their unfortunate pupils is a habit of cram, with the natural consequence of a puny intellect often joined to intolerable conceit. The only way to escape from such a catastrophe is to require thoroughness of work, such as involves thought as well as memory. Now the habit of thoughtful application by the pupil must depend on the mode of examination, but there cannot be effective examination if the amount of work is so much as to make it a race against time to get it into the memory.

(c) **Examination.**—The daily examination of work should be oral and by paper. Oral examination will accustom the pupil to catch quickly the drift of a question, will train him to have his subject immediately at command, and will help him to readiness of speech. It will also show to the master where he can render help. Written examination will promote accuracy, thoroughness, and facility in composition. Besides such daily examinations, there should be formal ones, at not distant intervals, to secure the reading up of back work, and that more vigorous effort which the bringing together of related things demands.

3. **Pupil Teacher's Moral Training.**—The influence that he will have on his pupil's character should never be absent from the recollection of the master. Whether he will it or not, he cannot but exercise a great influence over him. The pupil, consciously or unconsciously, will take many of his moral and intellectual

mouldings from his master, so that, what the one is the other will become. Hence it is of the first importance that such influence should be of the highest kind, and should be directed to the best ends. The master should be the friend of his pupil, and should strive to secure his regard and confidence. He should carefully advise him as to his associates. He should kindly criticise and advise in matters of dress and demeanour. He need not be lavish of admonition, but should the need exist, he must not withhold friendly counsel or warning. Above all, he should endeavour to instil high aims and aspirations, and to implant principles that will lead to whatever is lovely and of good report.

III. **Monitors.**—1. Monitors are necessary in many schools. They help in such schools to solve the chief problem of school keeping—how to keep all profitably busy during the whole of school time. 2. The duties to be discharged by them are necessarily of a mechanical kind. They may assist drafts in *preparing* reading, spelling, and tables; and they may help in supplying practice in arithmetic by dictating examples, or by overlooking silent work. 3. The master or pupil teacher must not only revise all work thus prepared, but build his own instruction upon it. Monitors do not relieve the master of the duty to come into personal contact with each child. 4. The advantages which flow from their employment are obvious. They give to the master the opportunity of acting on many points at once, not only by keeping all employed, but as directors of movements and commands. To the school they are of use in preserving the children from the idle and mischievous habits which they might form. To themselves their employment brings the advantage of acting under special responsibility and of training them to diligent application, prompt obedience, and self-control. 5. Few monitors will be needed in any school. In such schools where their work is necessary, the number employed will be few if the organization is good. In all schools they may render useful aid. They must be wisely selected. They may be so from any part of the school, and they should not be employed more than one hour daily. A plan that was very effective was to have a monitors' list of all boys in the advanced classes who had the necessary qualifications. This secured th

no one was absent from his class except for occasional service.

### APPENDIX III.

#### STUDY.—AN ADDRESS TO YOUNG TEACHERS.

Few things are so important in a race as a good start, with a full perception of the distance to be run. Striking the right key is essential to harmony. Let us endeavour to make a good start by setting forth to our minds the characteristic of the race to which our subject invites us. Let us, at the outset, strike the right note. By study is meant *work*—brain work, mind work—yet real downright work. To study is to bend all the energies of the mind to the attainment of knowledge ; it is to put forth all its powers in the pursuit of truth. The habit of study is the practice of being thus engaged whenever the mind is not occupied by those engagements which enter into the ordinary routine of life. By a student is understood, either one who is acquiring this habit, or, in a fuller sense, one who has acquired it. The habit is not a natural one, any more than is a taste for vinegar or a liking for tobacco. In forming the habit the natural repugnance of the mind to intense and sustained exertion has to be overcome, and the habit cannot be acquired but at the expense of much labour, and as the result of a strong and determined will. For the mind has inertia like matter, that is, it opposes resistance to a change of condition. It dislikes being disturbed, and it requires a strong force to get it to move, and to keep it moving. 'Tis true that activity, incessant activity, is one of the characteristics of mind. Mind, that is, would cease to be mind the moment it ceased to be active ; yet, to the direction of all that activity into one channel, to the continuance of it for a length of time in one direction, to the bending of its energies, and to the controlling of its laws by a determined will, the mind offers more or less resistance. Although perhaps it would be nearer the truth to say that the resistance is in the mind's servant, the brain, rather than in the mind itself,—the brain, without whose instrumentality the mind in our present state does no conscious work.

In setting forth work as the prime feature of study, and in contending that the mind requires pressure to engage therein, it is well, nevertheless, to remember that pleasure is the invariable concomitant of this work, and is one of its most frequent rewards. Nay, we may go further, and maintain that—always excepting communion with God—the pleasure of a human being as such is in the exercise of his mind, and that the more mind is mind, the more is joy the condition of its existence. And not only is pleasure thus the invariable attendant on mental exertion, but some of the highest and most exquisite enjoyments are amongst its most frequent rewards. Let me refer you to three facts illustrative of my meaning. Can you doubt the ecstatic state of Archimedes when he jumped from the bath and ran home, oblivious of his nudity, crying *Eureka*? Or is it to be doubted that Franklin felt something of the same kind when he identified lightning with electricity, and when his friends had to force him away from his experiment lest the fluid should strike its devotee to the ground? And must we not say that Kepler was thrilled with joy and with awe when, establishing the truth of his conceptions, his celebrated laws, by rigid mathematical demonstration, he exclaimed, “O God, I think Thy thoughts after Thee!”

Some young men, especially if they possess a little more than ordinary ability, take up the notion that minds of genius—as it is called—have no need to work as ordinary men have ; and, run away with by this notion, they do not work, lest forsooth their friends should give them no credit for genius. But a greater mistake was never made than to think that any mind can grow, or become great, or possess the use of its powers without work. For while the fact is undoubted that some minds have greater native vigour than others, and while it is also undoubted that some are superior to others, not because of any inherent difference of mind, but because of the difference in the weight, that is the quantity, or in the quality of their brain, or both ; it is still more undoubted, by all whose opinions on the subject are worth anything, that no mind, however great its power, or however high the eminence it attained, ever reached this eminence at a bound, or ever possessed the use of its powers without arduous labour. No doubt there have been cases in which men have suddenly burst upon the world in a blaze of brilliant, dazzling light ; but though sudden to the world,

the secret history of such men has invariably disclosed the fact that the fire had been long kindling, and the combustibles long in gathering. Do not then, young men, fritter away the morning of your life, or waste your opportunities, from supposing that you can ever attain anything worth possessing without habits of study, or these without arduous and incessant work.

We shall get a clearer conception of our subject if we set forth to our minds the design of study, that is, what are the ends it should attain. So far as we have got the conception that it is work, we have made an advance ; still the notion is but vague. For there is much work that cannot be distinguished as study because worthless, and there are workers who are nevertheless but laborious triflers. The primitive meaning of study is to pursue, and as to pursue implies an object of pursuit, the very term involves that to study is to set before the mind some object and steadily pursue it. If, again, we look at the conventional or current use we shall find that it embodies this primary fact. To study, in common parlance, is to apply the mind to some subject till it is mastered. It is to examine and con in order to learn, and it is also to convince ourselves by investigation and thought of the truth or falsehood of any subject to which we apply ourselves. But if we were to rest here we should still have but obscure notions of our subject. Let us then more minutely examine it, so as to be able to answer what we mean by study, and what is the character of a student. Now this, it strikes one, will appear from considering its fourfold design.

The lowest aim of study is by the application of attention and memory to furnish the mind with knowledge, and with the materials of a higher culture. By attention is meant the withdrawing of the mind from other things to the one thing it is intended to learn. In learning this thing, whatever it may be, there will be employed various faculties of the mind, or, if it please you better, the mind will engage in several distinct operations. Now attention is simply the condition of the faculty at the moment of its exercise. In other words, it is to say that the faculty is doing its work at the moment. The next moment some other faculty may be required, and if it is forthcoming at the right moment in its right order, then we say that it too is in the state of attention, and if this goes on consecutively and completely

to the end, then we say that the mind has been in the state of attention. When a subject has been thus acquired, it is the office of the memory to retain it, and to have it forthcoming whenever required. Now, in such an act of study as this, the test that we apply to its value is the amount of knowledge that has been acquired. It is true that such a continuance of effort secures to the mind itself a certain advantage, but it is not this advantage that is the aim, but the possession of knowledge. And this we regard as the lowest result of study.

A higher design, with a corresponding result, of true study, is the discipline of the mind itself. Such discipline when complete includes three things.

The first mark of a disciplined mind is the mastery it has of its several powers. These powers are entirely under the control of the will, and they can be bent at any time to any work, and for any length of time, as far as physical conditions will admit. They are also so under control that a subject of thought can be taken up and pursued day by day, for months together, each day commencing at the point of suspension of the preceding day. The second mark of a disciplined mind is the condition of the faculties themselves. Each has been rendered more acute, each has been endued with greater vigour. There has been nothing one-sided in its development, but the mind can not only control its operations, but can strenuously exert its several powers. The third mark of a disciplined mind is its power of original thinking. The mind generally is occupied with the labours of other minds, a very valuable thing truly, but that mind gives up its birthright that yields itself solely to this, and does not itself exercise an originating or creative power.

Now this design of study is more important both in its nature and results than the former. Not that you can accomplish it without the former, nor can you secure the former without, to some extent, securing the latter. Still of two students, the one who measures his progress by ascertainable results, that is, by the knowledge he possesses, is not such a student, and has not as valuable an estate, as he who measures it by what he can *do*. Two persons may go through the same amount of muscular exertion in a day, one in breaking stones, and the other in well-directed gymnastics. But they are not in the same state at the end of the day. 'Tis true, the one can point to a heap of stones,

though that is not all the result, only that which is measurable, and the other cannot. But can any one doubt that for the purposes of life, activity, vigour, and the command of his limbs, the latter is the better of the two?

Another design of study is to give a right tone and direction to the ordinary current of thought and feeling, and to make the mind the master and not the servant of the brain. This design is really involved in the other two, but it requires a distinct notice because of its importance. At Greenwich Observatory there is a table on which is placed some prepared paper, and this paper is under the point of an instrument, which by its ever-varying motion records the direction and force of the magnetic current of the earth for every instant of time. Now suppose that a similar process could be applied to the mind. Suppose that an infallible transcript could be made of the varying currents of idea, and sentiment, and thought, and feeling which ordinarily occupy a mind not under the control of a vigorous will, nor endued with habits of study. What a poor, paltry, meagre, contemptible condition it would depict! Or, to change the illustration, suppose that by some mode of mental photography every successive phase of the mind could be pictured, what poor shrivelled pygmies would most men be found! "Doth any man doubt," says the father of modern science, "that if there were taken out of men's minds vain opinions, flattering hopes, false valuations, imaginations as one would, and the like, but it would leave the minds of a number of men poor shrunken things?"

The highest result of study is to place the mind under law, and to set it free—under the law of wise, constant, and ennobling thought—free from all that is debasing and grovelling in association and habits. Our fathers well understood this value of study by calling their schools "free;" not because they had no fees to pay, but because they had learned that learning, study, and education alone make men free.

A few practical suggestions on subjects of study and the use of books will still further illustrate our subject, and serve to set forth some special modes of study.

First as to **Subjects of Study**.—There is a kind of advice often offered with which we can go but part of the way. It is based on the fact that although all minds are

alike in their general features, yet there is a great diversity among them as to the strength of particular powers. Hence some are fitted to excel in one thing, and some in another. Hence the advice to give your attention chiefly to those things in which you have a reasonable prospect of excelling. Now this is good advice with a limitation. If what has been said about the inertia of mind is true, then your dislike of a subject may proceed from this, and not from any inaptitude in yourself. Hence, you may carry the maxim of considering your idiosyncrasy too far. Such a rule may become a mere screen of indolence, a mere excuse for idleness. You should hesitate to reject a good subject because you do not like it. You should bring yourself to like it. Be determined to like it. Work at it till you like it. By doing so you will be preserved from an exaggerated estimate of any branch of study—a fault to which those are liable who confine themselves too exclusively to a particular class of subjects.

A second remark on the choice of subjects is, you must remember that there is the same difference in them as in food, some are more nourishing than others. The same remark applies to authors. Two men, dealing with the same subject, do not in a given time set forth the same amount of aliment. Be careful then, not only that the subjects are nutritive, but that the authors are stimulating. For instance, if reading theology, avoid the frothy, superficial writing of the present time, and go back to the days of the giants. Make yourselves masters of "Pearson on the Creed," "Butler's Analogy," "Howe's Living Temple," and the works of Hooker, Stillingfleet, John Goodwin, South, Barrow, and such like. While on this point, let me say that if young men would form the habit of study, they must not read easy literature, books that demand no effort, such as many of the serials, and most of the fictions in circulation. Nor must they read much of ephemeral interest, like the "leaders" in newspapers. When they do such things, it should be as a relief from things on hand which require a long and heavy pull.

A third remark is, avoid books that profess to give royal roads to learning, that put forth pretensions of making things easy, which they usually do by leaving out the difficulties; so that the student who trusts to them often finds that he has not only not mastered the subject, but has laid

up difficulties in the way. The only way of making a subject easier is by having it treated on a good method, and in a careful graduation. No one ever becomes a student by shirking difficulties. But many are prevented from attaining what they might by aiming at too much at a time. Let us take a lesson from the way a judicious mother trains her little one. Not able to walk, he is laid on a carpet, and a ball or other plaything is placed where the child, on full stretch, can touch it with the tips of his fingers, and he is then encouraged to stretch and stretch until the prize is grasped. So do you. Let there be a subject that you can just touch, as it were, with the tips of your mental fingers, and then make effort after effort till it has become your own. Or, to vary the figure, bring to the pedestal that you are building for yourself, not rubble and slush, but large, massive, well-cut stones, that require all your strength to lift and carry, and an extra effort to put them in their place.

Another important thing is to approach each subject of study from the proper standpoint. Students of any subject are of all grades. Some are novices, just entering on the path ; others have advanced on the way ; while others have completed the course. Now there will be found in the world of literature books to suit each class, and it must be obvious that some that would be very proper books for one class must be very unsuitable for another. There are few things so necessary for young men as getting the right books, or beginning at the right point. There are many books and many subjects that cannot be studied until other books or other subjects have been mastered ; e.g., some of Emerson's writings, or of Carlyle's, must be either unintelligible or very misleading to such as have been unprepared to grapple with them by a previous course of psychological, ethical, or other study. Such writings have often a fascination about them to a certain order of minds ; but it is a fascination growing out of what they do not understand, for many admire in proportion to their want of comprehension. But really the conduct we now condemn is as silly as would be that of a French lad wishing to learn English, first addressing himself to the pages of Milton or those of Locke.

Now as to the **Use of Books**.—First, do not be ambitious to read many books. It is not the amount of

This reading that makes a student, but the quality. Two evils flow from reading many books. One is the habit of passing over a book to see what is said, rather than to examine its truth. So that reading becomes a device for passing away time, instead of an instrument of personal improvement; while of such a practice we may say with Butler, "that there is no time spent with less thought, than great part of that which is spent in such reading;" and the consequence almost invariably is, that the reader of many books has a much lighter mind, and one not nearly so vigorous as the reader of few. That is, one good book thoroughly mastered in a given time yields more than a dozen read through in the same time.

But another evil grows out of the practice of reading many books cursorily, rather than a few well. There comes not only the indisposition to read with thought, but the inability to do so. The mind gets burdened, the faculties get clogged, and the effort to move is as vain as it would be for a gymnast whose limbs were shackled with heavy weights. Perhaps no better instance could be adduced than that of the late Mr. Buckle. For quantity of philosophic and scientific reading, he perhaps never had his equal. Every page of his writings is crowded with indications of his vast lore; at the same time there is abundant evidence of the want of power of real thought, often ludicrously shown in statements that prove he had not caught the sense of the author on whom he is animadverting, or the principles of a system on which he is dealing out sweeping condemnation.

Second, avoid *fast* reading, that which springs from the desire to get through a book, and which in operation is an obstacle to that careful and attentive reading, without which you had better not read at all. To young students we would say, that no book is worth reading that is not worth reading three times; and for the young student we would lay down the rule that every book should be read three times. After reading a book, you should be able to give its general scope and mode of treatment. You should be able to state anything that the author holds, to recall the places where it is treated, and to show how it is illustrated or argued; and you should be able to state the grounds on which you assent to his views or dissent from them. Now we hold that these three things are, for the

young student, best pursued separately. Hence we would have a book read through consecutively with attention. At the end of every three or four pages, the reader to close his book and review what he has read ; and also frequently to write from memory a synopsis of what he has read, with occasionally a fuller statement. At the end of a chapter he should do the same, and also at the end of a part or book, if his author has so ordered the treatment of his subject. After going through a book in this way, we would have the student read it by its index, and if the book has no index, let it be a part of his plan in the first reading to make one. Reading by the index brings before the student all the places where a topic is treated, and helps him to form correct opinions of his author's views. Often by this means obscurities are cleared up, weak points are strengthened, and what may have appeared objectionable does not remain so. After thus making himself master of what a book contains, the higher end remains—to sit in judgment upon it, to read it as a critic, to examine its statements and its arguments, to take it up sentence by sentence, and paragraph by paragraph, in order to test the truth or falsehood of its contents, or the conclusiveness or inconsequence of its arguments. In doing this, two rules should ever be present to the mind. First, while we avoid a captious spirit, we must not be too hasty to accept what we read. For an indispensable rule in study is to hold the mind in doubt, to put one's self in the position, not of an antagonist, but of one who wishes to find the truth, and not merely to be convinced. If this is not done, there is the danger of passing over too readily weak arguments, or of accepting conclusions on insufficient grounds. A second rule in reading is, not to allow ourselves to be too much influenced by authority. That a person who has given much attention to a subject is in favour of it is a reason, and a very strong reason, why we should hesitate to reject it—why we should hold our judgment in suspense, but can be no reason for our accepting it without sufficient proof. It may be that the proof is complete, that it is irrefutable, but if it is not to us, it is not truth to us.

Finally, to the right use of books we must read by topics. No mode of study is more valuable, but it can be only indicated. All science or knowledge is distributable

into certain and uncertain, the first including all those subjects in which the most perfect reliance can be placed on the process and on the result ; the second comprising all other branches of human investigation—many of them being of the utmost importance to human well-being.

Now it is well to understand in what the uncertainty of these things consists. It does not exist in the things themselves. For instance, it may be uncertain to you or to me, whether the ground of moral obligation is in the fitness of things, or in the will of God, but there can be no uncertainty in the thing itself, it must be either in one or the other ; that is, it must either be true that a thing is right because God wills it, or that God wills it because it is right. Hence it follows that things that are absolutely certain in themselves, are uncertain to us, because of our inadequate knowledge, or because our powers are inferior to the task.

But besides these grounds of uncertainty, there are others proceeding from the medium in which truth is investigated or communicated. That medium is language. Now language, except in the certain sciences, is never a fixed or a constant quantity. For no two men does any one term contain precisely the same thing. Hence it is always uncertain in reading any book whether you have got all the meaning, or the precise meaning, of the author.

It is in the light of these acknowledged facts that we hold there is no better plan to approximate towards truth than to do what we have called reading by topics. Suppose for instance, you are a student of theology, and let us further suppose that you are going to master the arguments for the existence of God. Collect all the books you can that contain this, or part of this argument. Then, as the complete argument embraces several distinct points, take one of these points and work it up through all your authors. Bring together all they say. Compare every statement, every assertion, and every piece of reasoning. You will find as the result, first, that your mind is clear on the point itself. You have been saved from half-notions, from vague notions, and from mistaken notions, because one author has helped you to correct or supplement another. Secondly, you will find yourself in possession of an impregnable position, which you may use as a post for a further advance. Thus proceed with every point until the whole argument has become your own.

## APPENDIX IV.

## EXAMPLES OF NOTES OF LESSONS.

I. Natural Objects :—*Sponge*.—*Infants*.

I. Introduction.—*Show* specimens. Let the children handle and inspect them. Get the differences in texture.

II. Qualities and Uses.—1. *Ask* for uses. Used in washing the person, sometimes for cleaning windows. What fits it for these uses? *Let the children note* that sponge is soft, yielding, and elastic. It is soft. If hard, what then? It would hurt. It is yielding—easily pressed. We may have it squeezed very small or only a little. It will hold much or little water. What are the advantages of these qualities?

2. It recovers its shape. *Compare* with india-rubber, whalebone, and steel. *Ask for* the difference. What call this quality? What is the advantage?

3. *Have a saucer* containing water. *Apply* sponge to it. What takes place? The sponge absorbs and holds the water. How does the sponge hold it? *Have a piece of bread* and a small cullender. *Apply* these to the water. *Contrast* also with net, lace, or a basket.

4. *Apply* sponge and bread carefully to the surface of the water. Let the children *note the effect*. Holes become smaller. How is this? *Apply* the tip of a dry sponge to water. What takes place? The water runs up into the sponge. *Compare* with the tallow in a burning candle.

5. *Apply* flame to a dry piece, and get some of the children to smell it.

• III. What it is and where found.—1. *Show* asbestos, cotton, and sheep's-wool. *Let the children tell* if they can what each substance is. Which is sponge most like? Come to the sea-shore, south of Europe. Much sponge on rocks—made in the sea.

2. *How made?* A little animal—looks like a drop of the white of an egg—floats on sea—fastens itself to a rock—throws out a thread and fastens it round itself—then another and another, and so on.

3. What does it make it for? *Compare* with snail and with oyster. Sponge a house—the sponge-maker stops at home.

2. Natural Objects :—Spider's Web.—*Juniors.*

I. Introduction.—*Compare* spider and fly. Differences and resemblances. Spider intended to live on the fly. Compensation,—*compare* with lion-ant.

II. Web.—1. Made of fine threads, each thread composed of thousands of finer ones. How were the threads made? *Notice* abdomen, spinnerets, and bags of gummy silk. Each spinneret contains one thousand holes. Notice also the strength of the thread—*make an experiment* with one.

2. How is the thread fastened to the wall? *Show* that the broader the surface, the more points of contact, and the firmer the hold—*compare* with the roots of a tree—spinnerets pressed to the wall, hence there are four or five thousand points of contact.

3. Let the web now be *described*. Seems curiously interwoven, yet the threads distinct. How possible to accomplish this? If any have observed the process, help them to describe it; if not, excite their curiosity—encourage them to state how they think it could be done; then proceed to show how.

III. Use of the Web.—1. *Notice* the cocoon—the hiding-place—*compare* with hiding-place of the house spider.

2. A thread touched—the spider rushes out. How does it know? *Notice* its sense of touch.

3. Victim cannot escape. How the victim held fast and the spider not. *Notice* the difference between the threads leading to the hiding-place, and those which cross them—*touch* them slightly with a needle and watch the effect—*notice* also the hairs on its feet, which the spider can erect at pleasure.

4. What the spider does with its victim. Does it cast out the carcass like the lion-ant?

IV. Moral. Why should one animal thus live upon another? *Notice* the torment of a large number of flies.

3. Natural Objects :—Chalk.—*Juniors.*

I. Qualities. 1. Adhesive.—*Distribute* a few pieces. Let the children look at their fingers. *Crush* some. The children will see that it is firm, soft, brittle, and easily crumbles into a fine powder. They will note that it is slightly adhesive. How so? *Compare* with coal, soot, and

blacklead. *Write on the black-board.* What qualities fit it for this? The children to note colour, crumbling, and stickiness. *Draw lines* on a smooth slate and on a rough board. *Apply duster.* Class to note how much more easily it is removed from a smooth surface than from a rough one. How is this?

2. **Absorbent.**—Chalk in damp air becomes soft and moist. What has it done? *Crush* some and place in a plate which contains a little water. What takes place? Illustrate the quality by other things. Make experiment with sponge, bread, and lump sugar. *Apply a lump* of chalk to water and some crushed chalk. Which takes up most in a given time? How is this?

3. **Effervescent.**—*Pour diluted vitrol*, or vinegar, or spirit of salt, on some small pieces of chalk. What takes place? Compare with experiment with bicarbonate of soda and tartaric acid. How has this been produced? *Experiment again*, strike a match and put the flame over the chalk. *Experiment again*, and hold a tumbler over the chalk; strike a match, lift the tumbler carefully and place match inside. What has happened? What then? Infer the presence of a gas. Give its name. The children to infer that effervescence is due to the escape of gas.

4. **Description.**—The class should now be called on to describe chalk. Good chalk is firm, compact, soft, brittle, and crumbles into a fine powder. It is slightly adhesive, it may be made to effervesce, and it is made up of carbonic acid gas and lime.

II. **Uses.** 1. **Whiting.**—Let the class state when they have seen this used. What is it? It is made from chalk. Describe how. Chalk crushed and made into a paste, then mixed with water and left to settle. What for? What will take place? Heavier particles sink to the bottom. Left a long time, water poured off, the fine chalk mud is whiting.

2. **Land.**—*Refer to moist lands.* It is wanted to somewhat dry the soil, yet retain the moisture. How can it be done? Refer to absorbent properties of chalk. Mix crushed chalk with soil—what will the chalk do? *Refer to wheat* on chalk lands, and to other good lands. Give facts to show that those are most productive which contain chalk. Infer that chalk added to other lands will help. Ask for

the meaning of the farmer's saw, "The further from a chalk-pit the more valuable the chalk." What mistake might be made from the use of the word valuable?

3. **Medicine.**—Refer to its use. State that chalk is scraped and mixed with salt for young calves. Give instances of its use as a medicine. Infer that one of its uses is due to its being an absorbent.

4. **Chalk Ponds.**—Refer to ponds in fields. What are they for? Show that some soils would not allow water to remain. Give the mode of making a pond by the aid of chalk, so as to retain the water.

#### 4. **Natural Objects:—The Epidermis.**—*Juniors.*

I. **Structure.** 1. Point out its position, and explain the name. Close the hand and open it; let the children state the skin is elastic. Draw attention to differences in colour, when the surface capillaries have much or little blood, and let the class see that it is semi-transparent. Examine through a small magnifying glass, and then give that it is the outer coat of the dermis.

2. Pass a needle between it and the dermis; refer to pieces sometimes cut or torn off; pare the nails; and thus show that these may be done without producing pain. If the children's knowledge is sufficient, let them infer the absence of nerves.

3. Refer to perspiration. What is it? Where from? When most? Infer that it has pores or ducts through which the sweat passes. Infer that it should be kept clean.

4. Point out its wear and tear. Constant waste by friction, often removed by accident. Get instances of rapid repair. How is this? By a diagram explain the structure of the dermis, so far as bearing on this.

II. **Uses.** 1. **A Sheath.**—Let the class see that while it permits perspiration it also checks its rapidity. How so? Give facts to show that it is absorbent, but that it absorbs slowly, and that it will not permit some substances to pass. Thus it often protects from injurious substances.

2. Draw attention to the nerves. Why brought to the surface of the body? For the mind to become acquainted with the external world. If the nerves were exposed, insufferable pain would be the result. The epidermis protects from pain,—yet is so thin as to admit of sensation.

3. *Infer* also that it is a defence against friction. If the nerves were exposed, friction would produce great pain.

4. *Bring out* from observed facts that the use of any part thickens it, till it becomes like horn. This thickening, though comparatively rapid, may not be quick enough; refer to the blistering of the hands and feet; *infer* that blisters are a warning to desist.

5. *Notice* that the parts most exposed to pressure and friction are thicker than other portions, otherwise exertion would have been impossible.

#### 5. Natural Objects:—The Hand.—*Juniors.*

I. *Introduction.*—*Draw* rapidly from the children, by questions, all they know about the hand; its position—at the extremity of the arm; its parts—bones, joints, &c.

II. *How the Hand is fitted to grasp.*—*By holding* some object firmly in the hand, show its power to grasp. What contrivances give it this power? *Let them look* at their own hands, and *notice the difference* in the length of the fingers when straight, though they seem the same when bent. If this were not the case, we could not close our hands—hence could not have a firm grasp. When the hand is shut, the fingers fit closely into the palm. *By reference* to children making a drinking-cup of their hands, show the palm forms a hollow. It has a firm support—four bones firmly strapped together. *Notice* also thickness of cuticle. When grasping, we bend the fingers. By supposing the consequences, if made of whalebone, show the use of joints. *By comparing* with the hinges on a door, which enable it to move backwards and forwards, show that they are rightly termed hinge-joints. *Explain*, by means of a diagram, the structure of the hinge-joint—made by a projection in one bone fitting into a groove in another, formed by two projections. In grasping, the thumb presses on the fingers, and tightens the hold. What contrivance enables us to have this power? The fifth bone of the palm is left loose from the other four. *Recapitulate* the various contrivances for grasping. What other power has the hand?

III. *How it is fitted to pick up.*—*Notice* that we can bring the thumb into contact with every finger, not only singly, but also in combination. *Contrast* with the foot, which has not the power of picking up. Why? Attempt to pick up something without using the thumb.—

*Compare* with the squirrel, which holds up its food with both hands, because its thumb has not the opposing power.

*Notice* adaptation of the fingers for picking up the most minute object. The nails—hard, horny, and destitute of feeling. *Infer*, from the ease with which a ring passes over the finger at the end, that the end bone tapers, so fitting the hand to pick up any object, however small.

**IV. Delicacy of Touch.**—Now let us see what gives the hand this delicacy of touch,—a blind person becomes familiar with the shape of external objects by touching them. There are rows of little nerves arranged at the end of each finger, which carry impressions to the brain. *Compare* with the wires of the electric telegraph. When the nerves are exposed we feel pain. How is this prevented? The epidermis contains no nerves—hence has no feeling; it is very thin—therefore does not interfere with the work of the nerves.

#### 6. Common Things :—Filters.—Seniors.

##### I. Introduction.—*Connect* with a former lesson.

*Refer* to that on springs. Rain when formed is what? Pure water. What takes place when it passes through the air? It takes up oxygen, carbonic acid gas, and sometimes solid particles. *Bring out* from the class what takes place before the rain appears as spring water. How have these changes been effected? By passing through the earth. Our lesson to-day is on a similar process.

**II. Sources of Impurity in Common Water.**—*Refer* to water in common use—to water in reservoirs, or brought, as by the new river, to London. What impurities are likely to collect? *Refer* also to streams in the country, and to their exposure to sources of pollution. *Refer* also to wells and to the fact of sewage gases passing into the water. Get from the class the kinds of impurities—solid matters in solution or suspension—and gases. How separate them?

**III. Simple Filter.**—*Show* some slightly muddy water and some of the same filtered. What has taken place? How? *Let it be understood* that the purpose is not to extract a gas, but to separate the solid particles. *Lead* the class to *infer* that they must be arrested. Let them also *discover* how this can be done. Then *construct* a simple filter. Have two tumblers, a larger and a smaller.

Have small holes drilled into the bottom of the larger. Place over these some folds of blotting paper and cover with sponge. Place the larger glass over the other, pour in some muddy water, and watch the result. Question the class as to what has taken place.

**IV. Domestic Filter.**—1. Having thus made clear how solid matters may be arrested, refer again to the impurities. Some are of a kind that would not be thus extracted. Refer also to waters containing gases. How detect these? Show some pure spring water and water into which gases have been forced. Draw attention to the sparkling of the latter. Let the class infer that sparkling water is not pure. Now how extract these matters? Lead the class to see that if a gas is to be extracted it must be by some substance which will attract it and combine with it. So of other things. Now suppose it is a gas that will chemically combine with carbon, then carbon must be used.

2. By means of two large flower-pots proceed to construct a filter as before, but more elaborately. Place a sponge in the hole of the lower one. Then fit a sponge in that of the upper one, cover this with a layer of sand and pebbles, and this with a layer of charcoal, and at the top of this another layer of pebbles. Then place the larger so as to fit in the top of the lower, place a jug under the lower, pour in water, and watch the result. Question the class on what has taken place.

#### 7. Common Things:—**Soap Bubble.**—*Seniors.*

**I. Introduction.**—*Have ready* a cup containing a mixture of soap and water. Blow into this through a pipe and bowl. Bubbles are produced.

**II. Construction.** 1. *How formed.* Throw one off. What is it? Let the class *describe* it. There is a thin film surrounding air. What has the mixture of soap with the water secured? Let the class *see* that two effects have been produced. (a) There is more cohesion. What call this? Attraction of cohesion. *Give* other instances. (b) There is elasticity. *Show this* by the attenuation of the film, until the cohesion is overcome. What takes place then? (c) *Refer* to the air in the bubble. How did it get there? Through the film, or did the film close? *Experiment*, and carefully watch the bubble as it rises, and before it is thrown off the bowl.

2. *Shapes.* (a) *Get out* that at first it is *spherical*. How is this? *Refer* to cases in which the bubble bursts. *Infer* pressure of air inside. How is it that the bubble does not burst at once? *Bring out* pressure of external air. What must this pressure be since the bubble is spherical? In all directions. What besides? *Lead* the class to see that it must be equal pressure in all directions. (b) Note that the bubble does not retain the spherical shape. It begins to lengthen towards the earth. What call this shape? *Prolate spheroid*. Give illustration. How is this produced? To what is this owing? Attraction of gravity. Illustrate this by other instances.

III. **Motions.** 1. Let the class state what they have observed. How *explain* the rising? Suppose the water forming the film to be in a drop, what would happen? It would fall. How so? What then is the cause of the bubble rising? Compare with a balloon. *Experiment*, take a sewing machine oil-server. *Insert* its long fine tube into a tumbler of water, and inject a drop of oil. What is its shape? To what does it owe this globular shape? Equal pressure of water round it. How came it to rise to the surface? *Get the class to see* that it occupied the space which a drop of water of the same bulk would. *Experiment*, to show that equal bulk of water and oil are not equal weights. What do we say of the oil? Its specific gravity is less than that of water. Repeat the question. What makes the oil rise to the surface? *Refer* to former lesson on pressure of liquids.

2. *Let us return* to the soap bubble. With what is it inflated? Breath. That is? Air, moisture, and a small quantity of carbonic acid gas. And these are? Heated. Then what will the bubble be? Specifically lighter. What then causes the bubble to ascend? The upward pressure of the air. How high can it ascend?

3. What causes it to burst? *Refer* to opposing pressure of air in and out. *Refer* also to the resistance of the film. *Bring out* that the water of the film is evaporating, then the film is getting *thinner*. What causes it to burst?

IV. **Colours.** 1. Let the class note the colours Throw off a bubble, if possible, into the sun's rays. Note the colours and their order. How are they produced? Compare with the soap and water. Proceed to ask how the bubble is visible? Rays of light are reflected from it.

Then the class must be led to see that the colours are produced by rays of light. *Show a prism*; if possible, have the colours thrown on a screen. Tell of Sir Isaac Newton and his experiments. Give the primary colours, and show how the others are produced by combination. *Note* their order. *Apply* to the soap bubble—the rays of light enter the bubble and are broken up—refracted, and then reflected. *Refer* to the rainbow.

2. How *explain* the different colours? Refer again to light as their cause. These rays fall on the retina and excite sensations. *Infer* colour is a sensation. How then different? *Refer* to sound. Different notes according to the number of vibrations in a given time. Is this the case with colour? Give the facts.

3.—*It might be well to break up the above into three*

### 8. Exposition :—The Palm Tree.—Juniors.

“ It waved not through an Eastern sky,  
Beside a fount of Araby :  
It was not fanned by Southern breeze,  
In some green Isle of Indian seas.  
Nor did its graceful shadow sleep  
O'er stream of Afric, lone and deep.”

1. Palm—why  
so-called.

Palm. Ask for anything else so named; then why this so called? Lead to infer some resemblance. State the fact of the likeness. Trees *often distinguished* by their leaves. Connect date with dactyle—a finger-shape of the fruit.

2. Habitats.  
Araby. Indian  
Isles. Afric. . .

What places named? Why? *This tree not*, as though it *ought to* have been there. These the native *lands* or habitats of the palm—here exotic, there indigenous. Araby, in the East.—Compare next verse, “orient mould;” connect oriental, orient; east, eastern. Ask for opposite terms—western, occidental.

3. Eastern.

Ask for the assertions. How many? Meaning of waved.—

4. Waved, Fanned,  
sleep.

5. Southern breeze. Compare *wave* of sea—gentle undulation. *Fanned*—suggests motion; both terms suggest gentle winds.—Look at word *sleep*—what does it imply? Rest, no motion—hence a calm.

6. Afric lone. *Fanned* by what? Why “*southern*” breeze? Notice land and sea breezes. When from the sea? Would it be fanned by a breeze from the land or sea?

7. Other words. Why lone? A place lone that has few people. Parts of Africa but thinly peopled.

7. Other words. Connect “*green isle*” with “*verdant isles*” and “*Emerald isle*.” *Isle*—*islet*—*island*. *Shadow*, *shade*—*stream*, *streamlet*—*fount*, *fountain*.

### 9. Exposition:—*Mylo*.—*Juniors*.

“*Mylo, forbear to call him blest*,” &c.

#### OUTLINE NOTES.

##### 1. Explanations of terms and allusions.

*Mylo*; notice the once common practice of introducing fictitious personages into both prose and verse, when about to “point a moral”

*Treasures of the west*; compare with the lines, “I would not change my native land,” &c.

*Conspire*; usually taken in a bad sense; refer this to its etymology, implying secrecy; here used in the sense to agree.

#### SPECIMENS OF TEACHING.

##### 1. Specimen of Examination.

By whom is this piece written? Dr. Watts. To whom does he speak? *Mylo*. What does he tell *Mylo* to do? *Forbear to call him blest*. Who is it that is called *blest*? *He who boasts a large estate*. What then is *Mylo* told to do? *Forbear to call him blest, who only boasts a large estate*.

##### 2. Specimen of examination and explanation.

*Mylo* is the name of a person—*addressed*. Who was he? As you do not know, I will tell you that he was not a real person. What then is he? Where did he exist? Nowhere. Certainly not; but

*With golden sands;*  
compare Heber's  
"Where Afric's sunny  
fountains," &c.

*A narrow soul;* often  
used to designate a niggard,  
a bigot, a man  
whose thoughts and  
pursuits are devoted to  
himself. Compare with  
"large-hearted."

II. *Illustration of the  
subject,* to bring out  
that people are not to  
be judged by their cir-  
cumstances.

1. Bring out that it  
is a common notion that  
rich people must be  
happy; hence Mylo is  
made to think so.

2. Trace this to its  
origin. Notice how  
riches conspire to make  
a man great. How peo-  
ple crouch to him, copy  
his sayings, doings, and

3. Imagine a man  
with riches beyond con-  
ception, but with no-  
thing else to distin-  
guish him, all his  
thoughts in himself  
and his money,—

(a) From the want  
of a pursuit, time  
hangs heavy on his  
hands.

(b) Or, dissatisfied  
with what he possesses,  
he is anxious for more;

(c) Or, having no-

then how comes he here? The author thought him, teacher. Then you might say he existed where? In the author's mind; yes, or in the author's *imagination*. Then what sort of person would you call him? An imaginary person. Well, and an imaginary person is one—who does not *really exist*. Now a person that does not really exist is sometimes called—? Well, suppose I write a book about people and things that never existed, what is my book called? A novel. Certainly! but novels, because the persons and things are imaginary, are called *works of fiction*. A fiction is—a thing that does not exist. What sort of person would you call those spoken of in novels? *Imaginary*, yes, or *fictitious persons*, and a *fictitious person*—is one that does not exist. Who then was Mylo? A *fictitious person*. That is he never—*really existed*, but is spoken of—as if he had.

3. *Specimen of treatment of the  
subject.*

Why is Mylo introduced?—What did you say Mylo was? A *fictitious person*, spoken of as if he existed. Now, how should such person seem to speak and act? Like other people. Certainly, or they would not be spoken of—as *real persons*. Then what do these *fictitious persons* do for *real persons*? Stand in their place. Yes; and one who stands in the place of others is said to—*be their representative*. Then Mylo is intro-

thing to do, what he possesses fails to satisfy him;

(d) Or, miserable if people do not pay him the deference he thinks his due;

(e) Hence infer that we ought not to judge of people by their circumstances.

duced as—a representative of others.

Whom does he represent? What other people?—What is he told to do? Forbear, &c. What does this show he must have done? Called rich people happy? Why did he think them happy? Because they were rich. Now what did you say Mylo was? A representative of others. What others? and so on.

#### 10. Exposition:—Temple of Fame.—Seniors.

“The Temple shakes, the sounding gates unfold,  
Wide vaults appear, and roofs of fretted gold  
Raised on a thousand pillars, wreathed around  
With laurel foliage, and with eagles crowned.”

1. **Temple.**—Connect with root. Literally a small space cut off or marked out. *Compare* with time. Early given to the place marked out for religious services, then to the building. The temple at Olympia first a wood. *Compare* with Druids' temples. *Refer* also to space marked out by augur.

2. **Fame.**—Connect with phao, to bring to light, hence that which makes known. *Temple of Fame.* Fame a goddess. *Refer* to Grecian practice of deifying—they had gods many. Why represent fame by a woman? Perhaps because women are great talkers and like to spread news.

3. **Temple of Fame.**—Such a temple never was. It is imaginary. Yet there is such a thing as fame, and many men and deeds of former times are now called famous. What did the poet wish us to learn?

4. **The Temple shakes.**—Refer to the effects of sound, to the crash of echoing thunder. What makes the temple shake? The goddess was usually represented with a trumpet, she has summoned her worshippers. *Compare* with ringing the church bells.

5. **Sounding Gates**—Gates in a temple ought to move noiselessly. But these gates are made to reflect the sound. What for?

6. **Wide Vaults appear.**—Connect vaults with its root, hence an arched roof. *Apply* to vault of heaven,

vaults for the dead. *Refer* to lads vaulting. Why should the temple be vaulted? Arches are for strength, hence the poet might intend to suggest that only durable fame is desirable. *Refer* also to a trumpet, and how its shape aids the sound. *Infer* that sound issuing from a vaulted temple would be louder.

7. **Roofs of Fretted Gold.**—Gold is valuable and durable. *Fretted* in architecture means fillets interlaced for ornament; but there is *fret*, to wear. What is the poet's meaning? Fame should be for worthy deeds. Like ornamented gold it should please. Refer to Sir Philip Sydney at Zutphen. It should also endure. Gold is durable, but fretted gold would wear, and not be so fresh in its appearance. Fame loses its freshness.

8. **A Thousand Pillars.**—It is a temple for many worshippers, hence of large size. Multitudes seek to be famous, and great numbers have won fame.

9. **Wreathed with Laurel.**—Refer to the consecration of the laurel tree to Apollo by Latinus; also to the practice of crowning with the laurel and with olive at the Olympian games. This was held to be a greater honour than would have been wealthy gifts. The founders of the games wished men to live for others, not for themselves. *Explain* "Laureate," and refer to the term Laureation as used in Scotland.

10. **With Eagles crowned.**—The eagle was the emblem of Jupiter. The poet intimates that such fame should be sought that has the approval of God.

(The above has been taken from the author's "Art of Teaching.")

#### 11. **Geographical Reading:—Cumberland.—Juniors.**

**First Lesson.—***Examination and Exposition of Text.*

I. **Examination.**—Gather the facts from the class. Ask for the meaning of terms explained in former lessons, as hill, mountain, peak, valley, stream, rivulet, lake, and head or cape. Bring out prominently new geographical terms as frith, tarn, fell, pike, and force.

II. **Exposition.**—1. *The name.* Refer to the old name Cumbria, by whom given? Compare with the term combe so common in the coteswolds. Refer also to

the explanation sometimes offered of Cumber, "heaped up," a graphic term for part of the county.

2. **Cumbrian Group.**—Applied to the mountains. Contrast with Pennine range. Show a picture. Explain by means of a clay model.

Cumbrian group. South-west part of the county. General effect of scenery, endless variety.

**Coal and Iron.**—Refer to the red marl district, to the red sandstone and coal measures near Whitehaven. Growth of iron manufacture. Increasing population, and spreading industries.

**Lead.**—Refer to the principal, near to Alston in the E. of the county, N. of Cross Fell.

**The Industries.**—Gypsum, limestone, granite, slate near Keswick, coal and iron, coal export, iron making, lead, plumbago.

Gypsum beds near Whitehaven and Carlisle. Large exports. Slate of a fine texture near Keswick and Ulleswater.

Lead and copper in many parts, especially near Alston in the E., N. of Cross Fell.

Plumbago at Borrowdale, near Keswick.

**Coal and Iron.** Refer to the red marl district, to the red sandstone and coal measures, especially between the mountains and the sea. Note the growth of population in the iron district, and refer to the growth of Maryport, Workington, and Whitehaven. The export of coal to Ireland, Scotland, and Isle of Man.

3. **Fell.**—Get the names of several mountains. Refer to occupation by Danes; *cf.* Snaefell in the Isle of Man, and Snowdon.

4. **Tarn.**—Describe one, and compare with lake. Note their situations, often the source of rivers, *e.g.* Derwent.

Lakes and tarns. Three classes, larger ones as Derwentwater, Bassenthwaite, Thirlmere, and Ulleswater. Smaller lakes as Ennerdale, Wastwater, Buttermere, and others.

Tarns, as Overwater, Burnmoor Tarn, S.W. of Scaw Fell.

Trace the Derwent. Source in sparkling tarn in the crags at the head of Borrowdale, passes through Skyhead tarn, forms Derwentwater, flows through Bassenthwaite. Has a course of about 33 miles.

5. **Force.** Refer to torrents, especially after much

rain. Show that the terms cascade and water fall are applied in some places, force in others. Describe some of these as seen from a distance—a silver streak of light on the mountain side—refer to Southey's, "How the water comes down at Lodore."

## 12. Geographical Reading:—Cumberland.—

### *Second Lesson: The County.*

**I. Position, Shape, and Size.** 1. **Position.** Give direction from London. To what group of counties does it belong? Give parallels  $54^{\circ} 6'$  to  $55^{\circ} 7'$ . What extent does this give? Then note where the  $3^{\circ}$  meridian passes. Time on this meridian when it is 12 at Greenwich? Note position as regards the sea. What call it on this account? Give length of coast, between 80 and 90 miles.

2. **Shape.** Draw attention to the map. Let them notice the peculiar outline. Give that it has been roughly likened to a butcher's cleaver, and by some to a climbing bear.

3. **Size.** Let a lad measure extreme length and breadth and apply to scale, about 74 and 34 miles respectively.

**II. Surface.** 1. **General.** Describe it. Note its contrasts. Three marked divisions. One N. and N.W., beyond the Roman wall, low, flat, or undulated. Middle, hills, valleys and ridges of elevated ground. S.W. and E. mountainous. In all parts much varied scenery, especially along the rivers

2. **Cumbrian Group.** S.W. Recall the explanation of the terms. Give conception of the grouping. Fix a position, say on highland near Arlecdon looking eastward. Three groups, so blended as to form what may be called the outer ring. To the left are the vast masses of Skiddaw and the Saddleback, and north of them High Pike with spur towards Wigton. Then directly east of our position is Helvellyn, and a little northward Dod Fell and White Pike. Then to the right forming the boundary southward are Scaw Fell and Bow Fell, with the spurs Wry Nose and Hard Knot. Betwixt our position and the outer ring there are the towering Pillar, Red Pike, and Grasmere Fell, with many others of varying heights and diversified forms. Show picture of scenery.

3. **Lake District.**—Try to give some conception of its

beauty. Notice the grouping of the lakes and towns. Describe the objects that would arrest attention in walks, drives, or sailings. Note the crag, the torrent, the cascade, and the force.

(a) **The Western Lakes**—Describe approach to Ennerdale from Whitehaven. Note the hills skirting it. Walk along its shore of two miles and a half, and mention its depth of eighty feet. Looking across we see Red Pike, and a little to the S.E. the Pillar. Go to the point of the lake where the Ehen issues, follow its course to Egremont. Then go southward and turn to examine Wastwater, and to climb the monarch of the group, Scaw Fell.

(b) **The Derwent Basin**.—A little north of Scaw Fell, amongst the crags at the head of the Borrowdale region, are the sources of the Derwent and of its tributaries the Greta and the Cocker. Many of the small streams forming these rivers flow from tarns. On the east of Borrowdale Fell the Greta forms the large lake of Thirlmere, two miles and a quarter long and 108 feet deep. Westward the Cocker forms the lakes of Buttermere and Crummock, the latter being three miles long and 132 feet deep. The Derwent itself forms Derwentwater, amidst scenery of surpassing loveliness, and Bassenthwaite. Some miles below the latter is Cockermouth, and near the mouth of the Derwent, Workington.

**III. Industries.** 1. **Minerals**.—Gypsum beds near Whitehaven and Carlisle. Slate of fine texture near Keswick and Ulleswater. Lead and copper in many parts, especially in the east, near Alston. Plumbago near Keswick. Coal, especially in the west, worked under the sea at Whitehaven. Iron along with the coal measures and in other parts. Note the large increase of population in the iron district.

2. **Ports**.—The exports are fixed by the industries. The chief port, Whitehaven. In the time of Elizabeth it was a small fishing village of six houses. Other ports are Workington, Maryport, and Silloth, besides smaller ones. Much coal exported to Scotland, Ireland, and Isle of Man. Also packet stations. Reference also might be made to Barrow, just out of the county, as owing much to the mineral wealth of Cumberland.

13. **Exposition:—Peter and the Tribute Money.**  
 —Matt. xvii. 24—27.—*Seniors.*

**I. Words and Allusions.** 1. *Cupernaum.*—This was the ordinary residence of our Lord and His family during the period of His ministry. See Matt. iv. 13, and hence account for their application. Compare with Luke ii. 3, 4, and hence infer that the tribute now demanded was not of the same kind.

*Tribute.* Explain the difference between “tribute” and “tax.” Compare “custom” and “dues.” Compare Luke ii. 1—3 with Matt. xxii. 17—20, in order to get the Scriptural use of the term “tribute.”

“Jesus prevented him.” Peter comes in anxious to inform his Master of the demand for the tribute, when Jesus, *before* he has time, introduces the matter; thus showing His omniscience. Compare with Luke vii. 39, 40.

“Of whom do the kings of the earth take custom or tribute?” The argument which these words introduce shows the sense in which the term “tribute” is used. It is not in the sense in which the term is used in Matt. xxii. 17, for then the argument would have no force. Refer to the half shekel tax for religious worship, Exod. xxxviii. 26. The tribute now demanded (didrachma) is of the same value, about fifteenpence; and was doubtless the same tax. Hence the force of our Lord’s words, “Then are the children free.”

“*Then are the children free.*” Our Lord here asserts His Sonship. Compare John ii. 16.

*Offend.* Refer to the ordinary meaning of the word, and show that this is not its Scriptural meaning. Compare Matt. v. 29, 30; xxviii. 6, 7; 1 Cor. viii. 13.

“*Go thou to the sea.*” This miracle may be considered simply as another illustration of our Lord’s omniscience; or it may be considered as showing that with His sovereign power; in which case reference might be made to Mark iv. 41.

**II. Incidental Inferences.** 1. The narrative gives an illustration of Peter’s character, from which a caution might be urged against rash assertion.

2. The passage brings out forcibly our Lord’s poverty, and is the only instance on record where He exerts His divine power for His own personal benefit. Compare Matt.

iv. 3, 4. Hence a lesson of acquiescence in God's providence.

3. Our Lord turns every incident of His public life to the advancement of His great work. In this transaction He shows His *proper divinity*,—

(a) By His knowledge of what had taken place between Peter and the collectors.

(b) By the argument that, because the tax was for the service of His Father's house, therefore He, the divine Son, was free.

(c) By the circumstance of the fish.

III. Chief Lessons.—To form topics of inference and illustration after the previous explanation.

1. Submission to established authority, even when that is wrong, if the matter is indifferent.

2. Yield our rights, suffer wrong even in our intercourse with others, rather than throw hindrances in the way of their salvation—"lest we offend."

14. Scripture Geography :—The Chosen Inheritance.—Deuteronomy xi. 10—12.—Seniors.

I. We have here a brief description of the land of Palestine, then chiefly known as the land of—*Canaan*. Why so called? Gen. x. 15—20. At the time spoken of here it was in the possession of the Canaanites. Whose was it now to become? On what ground did they lay claim to it? It had been promised to Abraham, Genesis xii. 1—7. When children possess that which was their father's, they obtain it by inheritance. Now see Numbers xxxiv. 2. Hence it was called the land of Israel.

II. Why did God give this land to Abraham and his seed?

Here notice why God chose Abraham, and the object He had in view. It was that in him all families of the earth might be blessed. This was to be done, 1st, *by maintaining the knowledge and worship of the true God among his own posterity*; 2nd, *by diffusing it abroad through the nations of the earth*.

These are the two points which led to the selection of this country.

III. God would choose that land which was best adapted to secure His design. Now look at several points.

1. The mixture of different nations—nations unlike in their customs, habits, and worship—has a tendency to corruption. Men more easily learn that which is evil than that which is good. Hence the warning to the Israelites not to mix with the people of the land. Now to save the descendants of Abraham from this exposure, a land would be selected which was—*difficult of access*.

2. If there was a necessity for them to go much among other nations of the earth for the necessaries, or elegances, or luxuries of life, they would also be exposed to corruption. Hence the land chosen should be—*fruitful*, and should contain all that was desirable for necessaries, elegance, or luxury.

3. As a part of the divine design was ultimately to diffuse from them the knowledge of Himself and salvation—*the land chosen should be conveniently situated and well adapted for this purpose*. Now apply this to the land of Canaan or Palestine.

(a) It is so situated and surrounded by natural barriers as to be—*very difficult of access*. On the south and east are the deserts of Arabia and Syria; on the north the mountains of Lebanon; and on the west the Mediterranean Sea. Now the great monarchies and vast populations of ancient times were beyond all these land boundaries.

(b) It was a fruitful land, Numb. xiii. 27; Deut. viii. 7—9. The spies brought a *good* report of the land; to this they were constrained; they gave, as their subsequent conduct shows, an unwilling testimony, and therefore it is the more to be relied upon. Now some idea of the *capability* of the land may be inferred from the fact that in the reign of Nero, according to the testimony of Josephus, there were present at one Passover 2,700,000 persons.

(c) In its position it is nearly *in the centre* of the land of the *three great continents*. It was at no great distance from any of the kingdoms celebrated in ancient times, and yet was not so connected with them as to make its position dangerous. Surrounded as it was with the great populations, it was in the most favourable position, when the fulness of time was come, for the blessings of revelation and redemption to be diffused thence among all the dwellers on the earth.

### 15. Scripture Geography:—Jerusalem.—Psalm xlvi. 1—3.—Seniors.

Of all the places in the Holy Land none excite so much interest, or have connected with them so many engrossing associations, as its capital, Jerusalem. The capital of a country embodies the very character of that country ; hence Jerusalem, as the capital, would be linked with the object for which Palestine had been selected as the residence of God's peculiar people, and hence we might infer that it also would be a chosen place. It was so, 1 Kings xi. 32.

**I. Its Early History.**—The notices are few and scattered. It is supposed to have been *founded* by Melchizedek, Gen. xiv. 18. It was the scene of the offering of Isaac, Gen. xxii. 2 ; also 2 Chron. iii. 1. In the time of Joshua it was in the possession of the Jebusites, Josh. xv. 63, and was known as Jebusi as well as by the name of Jerusalem, Josh. xviii. 16. It was, with the exception of the stronghold of Mount Zion, wrested from them by the tribe of Judah, Judg. i. 8. It became a part of Benjamin's possessions, Josh. xviii. 28, and was subsequently made the capital of the country by David, 2 Sam. v. 5—9.

**II. It was the Scene of the Special Worship of God.**—It was chosen,—1. *As the repository of the ark of the covenant*, 1 Chron. xv. 1—4, and of the law. The two tables of stone and the original books of Moses were placed in the ark, Deut. xxxi. 24—26.

2. *For His worship.* For that special worship which was designed to keep Israel in remembrance of the great design of their existence as a separate people, to make a profound impression on their minds of the evil of sin, and to keep alive the hope of a Messiah. This special worship for the whole people occurred three times a year, Deut. xvi. 16.

**III. It is Remarkable for its Associations with our Saviour.**

Though our Saviour is only recorded to have made five visits to this place, yet here some of His most remarkable discourses were delivered, and in it, or in its vicinity, some of His most splendid miracles performed ; while the most thrilling recollections are connected with the brook Cedron, the garden of Gethsemane, the Dolorous Way, Calvary, and the Mount of Olives.

IV. It was a Type of the Church of God.—1. *As such it was the place of His special presence.* Here were the Temple, the Ark, and the Shechinah.

2. *As a type it was emblematic of the Church's security.* It was well secured ; on three of its sides it had a deep valley, known as those of Jehoshaphat, Hinnom, and Gihon. It was surrounded also by mountains. Built on hills surrounded by valleys, and these again by mountains, it presented an appearance of compactness and security, which excited the admiration of all beholders, Psa. cxxii. 3 ; cxxv. 1—22 ; Lam. iv. 12. It was well adapted, then, as an emblem of that security which is promised to the Church, Matt. xvi. 18.

3. *Of its beauty*, Lam. ii. 15. And the Church is to be presented to God without spot or wrinkle or any such thing, Rev. xxi 2—23.

16. Bible Lesson :—The Worldly Man.—Ezek. xxvii. 26.—Seniors.

I. Introduction —This is a description of Tyre and of its doom. God is unchangeable. Hence we may learn that as God treated Tyre so will He such as live like it. Here we have the picture of a worldly man, under the figure of a ship and a voyage.

II. The Fool.—1. *The Emblem.*—Refer to the opening of the chapter. A picture of a beautiful ship, then a transition from the ship to its merchandise, then a gorgeous picture of Tyre in its prosperity, then a reference to Tyre placed in an unexpected and most unlikely situation.

2. *The Application.*—A worldly man — his horizon bounded by time—confined to earth. Cf. Bunyan's picture of the man with the rake. Note the folly. He stands on the shore of a boundless ocean. On this he has to sail, yet he spends his time in heaping sand or gathering shells. Such a man was Esau. What does God say of him ? “Esau have I hated.” Esau as the representative of worldliness. God hates it. The friendship of the world is enmity with God. Listen again. To such a man God said, “Thou fool!” Give the case of the king who gave a staff to his fool.

III. The Danger.—“Thy rowers have brought thee.”

1. *It was unexpected.* “Great waters.” Refer to

ancient navigators hugging the shore, not venturing far from land. Great waters denote an unusual position, unexpected, unanticipated. A true description of a worldly man. His danger comes as a surprise. It is so often on earth, as in speculation. The rich fool said, "Many years." God said, "This night."

2. *It is his own bringing about.* "Thy rowers." Who are these? (a) *His desires.* Desire of money, desire of pleasure, desire to be thought somebody. (b) *His habits.* Habits are things formed. The term is taken from dress. Habits ought to be servants, but they become masters, and often tyrants. Illustrations—drinking, smoking, hasty speech. (c) *His companions.* He does not like to displease them, or he is afraid of their sneer. He is led astray. Give instances.

IV. *The Ruin.*—1. *The Agent.* East wind. Cf. Psalm xlvi. 4; Jeremiah xviii. 17. Hence irresistible. Against the east wind *there* the rowers have no power. Shall a man contend with God? Cf. Job xxvii. 19—22.

2. *The Time.* "In the midst of the seas." Note the position of time—eternity past—eternity to come. Cf. Wesley's "Lo on a narrow neck of land."

3. *The Picture.* "Broken." How fearful! Not stranded. Bring up the picture. "Then rose from sea to sky the wild farewell." "Broken in the midst of the seas." No hope—far from land—no rescue. "What shall it profit a man if he gain the whole world and lose his own soul?"

17. *Bible Lesson:—The Claims of Christ.*—Matt. xxii. 42.—*Seniors.*

I. *Introduction.*—What *think ye of Christ.* An appropriate question then and now. *Then*, 4,000 years of preparation, patriarchs, ritual, prophecy, punishment, general expectation. Yet when He came He was doubted, disbelieved, rejected, crucified. How so? Because they had false notions. *Now*, for nearly nineteen centuries Christ has been preached—but to how few known!

II. *His Claim.*—We ought to think of *Christ.* 1. *He is the subject of the Bible.* This book contains history, biography, poetry, philosophy, morality, prophecy,—but its chief character is, it is a revelation from God. It gives knowledge not otherwise attainable—the origin of man—origin of evil—the reason it continues—the resurrection—

and future judgment. *The Bible is the history of Jesus Christ.* He is its golden thread woven throughout—His name or His work shines on every page.

2. *His earthly history.* Angels announce His birth. A star guides men from the east. At His baptism the heavens open and God claims Him as His Son—every step of His life is marked by miracles—diseases flee at His touch—devils obey His word—the waves are still when He speaks—the grave gives back its dead. “He went about doing good.” Look at its closing scenes—the agony in the garden—the conflict on the cross—the darkness—the earthquake—the rent veil—the resurrection—and the ascension.

3. *Who is He?* Never such a one. Before Abraham was, I am. The earth had a beginning, He had none. He is God. He is also man. He is the Mediator between God and man.

III. Our Views.—As we think of a person, or value him, so we act. 1. *Anxiety to be saved.* The gift of God shows the value of man. If rightly seen, there will be earnest desire to have it. 2. *Faith in Him.* If we know Him we shall trust Him. No danger from which He cannot save, no guilt which He cannot remove, no enemy He cannot conquer, no sin from which He cannot save. 3. *Love to Him.* Love begets love. If we think we owe Him little we shall love Him feebly. But if we see Him as He is to us, we shall love Him much.

18. Bible Lesson:—The Rent Veil. — Matt. xxvii. 51.—Seniors.

I. Introduction. Behold! An expression of surprise. There has been a strange and a significant event.

II. What Happened. 1. *The veil was God's design.* He directed how it was to be made, and showed its pattern to Moses. It was a gorgeous piece of work. Fine linen, blue, purple, and crimson, embroidered with cherubim.

2. *Its place.* The tabernacle and the temple had a holy and a most holy place. The veil hung between the two. It was there as a screen. It could easily be moved aside, but it was not to be touched. It shut out everybody from the holiest of all. It also hindered them from seeing what was in it. There was the symbol of the divine presence, so it shut out from *that*.

3. *The Yearly Entry*.—Note the daily offerings and where made. Refer to the day of atonement. The solemn occasion. The national gathering. The sacrifices. The entering within the veil with blood.

4. *What Happened*.—This veil, designed by God, preserved with such care, which had hung through the ages, needing no renewal, a perpetual miracle, was now torn. There stood the priest at the altar of incense—he starts—his eyes fix—his knees tremble, his spirit quails—for the veil is torn. Surely it was by the hand of God.

III. *When it Happened*—Read the 51st verse.

1. *The Cry*.—“A loud voice.” What was the cry? It is given by John. “It is finished.” What is finished? We cannot tell all that cry meant, but we may be sure it meant the sacrifice is finished.

“ ‘Tis finished ; the Messias dies,  
Cut off for sins, but not His own ;  
Accomplished is the sacrifice,  
The great redeeming work is done.”

2. *The Death*.—“Yielded up the ghost.” It was His own act. It is finished referred to more than the death of the body. The Father had bruised Him. The sword had awaked. (a) Look at Heb. x. 20. Here the veil was a type of the *flesh* of Christ, *i.e.*, of His human nature, not of His body only. Hence the veil hiding the shechinah was a type of the human nature screening God. (b) Note the high priest offered the sacrifice before he passed within the veil. So Christ having rent the veil of His flesh appeared in the presence of God for us.

3. *The Time*.—Note that the two events occurred at the same instant. The rending of the veil of Christ’s flesh was the moment when the veil of the temple was torn in two.

IV. *Why it Happened*.—1. *Because the end had come*.—Rites and ceremonies having served their purpose, now cease. They were types, that which they typified had now taken place. They were shadows, here was the substance. They were symbols, here was the reality.

2. *Because now there is access to God*. The veil had hung for ages to show that God and man were separated; that man was justly excluded from His presence. But now there is a *right of access*. The barrier has been removed, and God by tearing the veil *acknowledged the right*.

3. *Because now there is a right of personal approach*.

The old system was one of vicarious worship. Now the minister has no greater right than the people. The old system admitted *one*, the new *all*. No minister can draw nearer than any of the people. All are on the same footing.

4. *Because now there is no limit to time.* Not now once a year, nor once a day. We cannot come too frequently, we cannot ask too largely. *Then it was death to go in, now it is death to stay out.*

17. Bible Lessons :—The Throne of Grace.—  
Heb. iv. 16.—Seniors.

1. The Throne Itself.—1. Here we are told of a throne ; a throne, you know, is—*the seat of a king*. If a person is raised to a throne, what would you say he had received ? Dignity. Yes, of course, we should say that dignity had been—*conferred upon him*. But he has received more than dignity. Well, he can now do many things that formerly he could not ; then he has received—*power*. (Here might be shown, if necessary, the ideas connected with kingly authority in the lands of the Bible ; then resuming—) You would say that a throne, in figurative language, is—*an emblem of power*.

2. What would you suppose such power was for ? (Various answers dealing with which the children should be led to educe that) *it is to punish the evil-doer*. Now when a person who has a right to do so, punishes the evil-doer, he is exercising —. Well, suppose a man breaks the law, say he robs a house : now if he were known, and no notice taken of him, what would the people do ? Clamour for justice. Yes, and if he were punished, there would be—*an exercise of justice*. Certainly ; then a king possesses power for purposes—*of justice*. And now we may say that a throne is an emblem of *justice*.

3. Well, just so of the throne of God. It is an emblem of His—*power*, for God is *all-powerful or omnipotent*. It is also an emblem of—*His justice*, and the Bible declares that justice and judgment are the habitation of His throne.

4. But the throne spoken of in our lesson is called—*the throne of grace*. What is grace ? You remember the apostle Paul on his way to Damascus. He was going, as he had done before, to commit murder, but he was stopped, and what did he receive from God ? *Pardon*. Then you

would say that he was treated—*as he did not deserve*; he deserved—*punishment*, but received—*pardon*. Now turn to the first epistle to Tim. i. 14; what does Paul say he has obtained? Grace; so that grace is—*receiving what we do not deserve*, or it is receiving—*mercy*; so that grace sometimes means—*mercy*, and a throne of grace will be a place where you may obtain mercy.

5. Yes, but you remember that a throne is also the emblem of—*justice*; so that a throne of grace is where you may expect both justice and mercy. It is where justice and mercy are united. You do not obtain the—*one without the other*.

6. But how can that be? Let us see. A boy breaks a law, and he is punished, that is—*justice*; he is pardoned, that is—*mercy*. Now I want to know, can there be justice and mercy at the same time? No. You think the boy could not be both—*punished and pardoned*. Neither can he; yet a throne of grace is where there are both—*justice and mercy*. Suppose a boy to break a rule of the school, and I tell him to stay in, that is—*justice*; if I let him go, I show—*mercy*; now I want to exercise mercy, and yet be just. How can I do it? (Here introduce the anecdote of the king and his son, who each lost an eye, from respect to law on the part of the father.) This accomplished it partly, but was not exactly the thing. Well, suppose now another boy was to stay in his place—*then the offender might go free*. Yes, his offence would be punished but he would escape.

Now you know that our gracious Lord and Saviour Jesus Christ just did for us what we suppose this little boy to do for his schoolfellow, He suffered—*in our stead*. Yes, never forget when you read of Gethsemane and Calvary that Jesus was *then dying in our stead*, and because of that—*there is a throne of grace*, a throne where the guilty can be shown both—*justice and mercy*.

II. The Blessings Dispensed. 1. What have we to come to this throne for? Mercy and grace. Yes, we have to come for mercy—*because we are sinners*. Day by day we must seek—*mercy*, for day by day we—*sin*. Just as we have been taught to pray daily, “Forgive us our ~~transgressions~~”

2. But we are also to come for—*grace*. (Here show from the case of Paul, 2 Cor. xii. 9, that grace is sometimes used to signify strength.) A boy gets another

boy to do wrong, it may be to tell a—*lie*; now this boy who does what another tells him—*is a weak boy*, he cannot—*resist temptation*. Now suppose God helps him to do so, then we say He has given him—*grace*; grace is—*for the weak*. Now, as we are tempted daily, and as we are all—*weak*, we must come—*for grace daily*.

III. The Manner of Approach. How are we to come? Let us come—*boldly*. Now what sort of a person is a bold person? Yes; he is not afraid, or a bold person is one—*without fear*. Then to come boldly is to come—*without fear*. Yes; we must not—*be afraid* when—*we come to God*.

GENERAL OR LEDGER REGISTER.

ATTENDANCE REGISTER, 1845, CLASS

SUMMARY REGISTER, 1874-5. Folio 1.

SUMMARY REGISTER, 1874-5. FOLIO 2.

No. who have attended 250 times.	Highest weekly average.	Total.	Admitted in past year.	Examinees who have been 250 times.		Present Standard.
				Class.	No. of Atts.	
No. who have attended 250 times.	Avg.	Total.	Left in past year.			
250 times.	Above 4.	Total.				
Und. 7.						
Over 7.						
Total.						
Ann. average.						
Total No.						
of attendants.						
No. of children on Register at close of School Year, aged						
(a) Bet. 3 & 7.						
(b) Above 7.						
(c) Tot. (a + b).						
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CLASS REGISTER OF WORK,-CLASS 4, MARCH 4, 1871.

Teaching

REGISTER OF PROGRESS.

JOHN GASKIN, ADMITTED, AGE.....: LEFT.....

I.—TIME-TABLE FOR A SCHOOL OF 50 BOYS.—MASTER AND MONITORS.

S.	Secular Instruction.			Religious Instruction.		Secular Instruction.		
	9—9.30	9.20—10.15	10.15—10.45	10.45—11.30	11.30—12	2—2.15	2.15—3	3—3.45
	<b>A.</b> Singing and Prayer Master reads Scriptures.	1 Reading 2 { Monitors.	1 { Dictation 2 { Mon. B. 3 { Trans- 4 { cription. M. coll. penes.	A. Arith. 1 { Dictats. 2 { M. & m. B. 3 { Reading. 4 { Mast. and Mon.	A. Read Scripture Mon. B. Bible Lesson Master.	A. Arith. in desks. 1 { Mon. 2 { B. 3 { Arith. 4 { M & m.	A. Extra Subject. 1 { Master. 2 { B. 3 { Reading. 4 { Mon.	A. Copy- books B. Copy- books.
	<b>A.</b> Ditto	1 Reading 2 Do. Mon. B. 3 Dictation. 4 Transcrip- tion. Mon.	1 { Dictation 2 { Mon. B. 3 { Reading. 4 { Mast. Do. Mon.	1 Arith. Mon. 2 Do. Mast. B. 3 Silent Arith. 4 Desks. Mon.	A. Bible Lesson. Master. B. Peep of Day. Mon.	A. Silent Arith. Mon. B. 3 { Object 4 { Lesson. Master. Do. Mon.	A. Reading. 1 { Mon. 2 { B. 3 { Do. Mon. 4 { Do. Mon.	A. Registers. B. Copy-books.
	<b>A.</b> Ditto	1 Reading. 2 Do. Mast. B. 3 Transcrip- tion. 4 Dictation. Mon.	1 { Composition 2 { Abtract. B. 3 { Reading. 4 { Reading. Mast.	A. Arith. M. 1 Do. Mon. B. 3 { Arith. 4 { Desks. Mon.	Read Scripture Mon. B. Bible Lesson Master.	A. Arith. 1 { Do. Mon. 2 { B. 3 { Arith. 4 { Mon.	A. Extra Subject. 1 { Master. 2 { B. 3 { Reading. 4 { Mon.	A. Copy-books.
	<b>A.</b> Wednesday.	Wednesday.	Wednesday.	A.				

Set home lessons.

Playground daily from 10.40 to 10.50.

NO. 2.—TIME-TABLE FOR A SCHOOL OF 70 GIRLS.—MISTRESS, PUPIL-TEACHER, AND MONITORS.

Day	9-9.30	9 $\frac{1}{2}$	9.35-10.10	10.10-10.45	10.45-11	11-11 $\frac{1}{2}$	11 $\frac{1}{2}$ -12	3	2.5-3 $\frac{1}{2}$	3 $\frac{1}{2}$ -4	4-4 $\frac{1}{2}$
Mond <sup>ay</sup> .	1. Reading Scripture. 2. P.T. & M. 4. Transcription.	1. Copy-books. 2. P.T. 3. Reading & Exposition. 4. Mon. Mistress collects penance.	1. Exposition of Reading. 2. Reading & Exposition. 3. Reading & Exposition. 4. Mon. Mistress collects penance.	1. Home Tasks examined. 2. Play-ground.	Arith. Cards 1 in desks 2 P.T. Arith. 3 in 4 drafts. Mistress & Mon.	Sewing 1 with 2 Misses. 3 Misses. 4 Misses & Mon.	1. Geography 2 Misses. 3 Misses. 4 Drafts & Mon.	1. Dictation P.T. 2. Do. Mon. 3 Reading in 4 Drafts, Mistress & Mon.	1. Dictation P.T. 2. Do. Mon. 3 Reading in 4 Drafts, Mistress & Mon.		
Tues <sup>day</sup> and Thurs <sup>day</sup> .	1. Bible Lesson. 2. Misses. 3. Peep of Day. 4. Transcription.	1. Copy-books. 2. P.T. 3. Reading & Exposition. 4. Reading. Mon.	1. Reading & Exposition. 2. Reading & Exposition. 3. Reading & Exposition. 4. Reading. Mon.	Arith. Cards 1 in 2 Misses & Mon. 3 Misses. 4 Cards in desks. P.T.	Sewing 1 with 2 P.T. 3 Do. 4 Misses.	1. Grammar. 2. Reading. 3. Trans. 4. Dictation P.T.	1. Dictation P.T. 2. Do. 3 Geography, or Object P.T. 4. Drawing	1. Dictation P.T. 2. Do. 3 Mon. alternately 4. Geography, or Object P.T.	1. Dictation P.T. 2. Do. 3 Geography, or Object P.T. 4. Drawing		
Wednesday	Reading Scripture. 1. M. 3. Bible. 4. Misses.	1. Copy-books. 2. P.T. & M. 3. Reading & Exposition. 4. Reading. Mon.	1. Reading. 2. Reading & Exposition. 3. Reading & Exposition. 4. Reading. Mon.	Arith. Cards 1 in desks. 2 P.T. Arith. 3 in 4 Drafts, Mistress & Mon.	Sewing 1 with 2 Misses. 3 Misses. 4 Misses & Mon.	1. Geography 2 Misses. 3 Misses. 4 Drafts & Mon.	1. Drawing. 2 Misses. 3 Misses. 4 Object Lesson. P.T.	1. Drawing. 2 Misses. 3 Misses. 4 Object Lesson. P.T.	1. Drawing. 2 Misses. 3 Misses. 4 Object Lesson. P.T.		

NO. 3.—TIME-TABLE FOR A MIXED SCHOOL, 90 CHILDREN.—MASTER, PUPIL-TEACHER, AND MONITOR.

Wednesday and Friday.	Tuesday and Thursday.	Monday.	9-9½	9½-9.35-9.50	9.50-10.25	10.25-11	11-11½	11½-12	2	2-2.30	2.30-3	3-3.15	3.15-3.45	3.45-4.15
1} Read 2} Bible. 3} M. 4} Read 5} Registers.	1} Bible 2} M. 3} Read 4} Bible. 5} Peep of Day. P. T.	1} Read 2} Bible. 3} M. 4} Registers. 5} Ditto.	Home tasks, ex- mined. Collect	Copy- books. M. Read in P. T. & m.	1} Copy- books. 2} M. 3} Read in P. T. & m.	1} Read in Playground. 2} in P. T. & m.	1} Arith. Cards Registers.	1} Sim. Read in M.	1} Draw- ing. 2} Reading in M.	1} Draw- ing. 2} Reading in M.	1} Dictn. M. 3} Geor. P. T. 4} M. & m.	1} Dictn. M. 2} Geor. P. T. 3} M. & m.	1} Arith. in drafts. P. T. & m.	
1} Read 2} Bible. 3} M. 4} Read 5} Registers.	1} Bible 2} M. 3} Read 4} Bible. 5} Peep of Day. P. T.	1} Copy- books. 2} P. T. 3} Read and Exposn. 4} M. 5} m.	1} Read and Exposn. 2} M. 3} Read and Reading. 4} M. 5} m.	1} Arith. in Registers. 2} M. 3} Reading in Registers. 4} Cards in Registers. 5} in P. T.	1} Gram. 2} M. 3} Reading in Registers. 4} Cards in Registers. 5} in P. T. & m.	1} Reading in Registers. 2} in P. T. & m.	1} Arith. Registers.	1} Gram. 2} M. 3} Reading in Registers. 4} Cards in Registers. 5} in P. T. & m.	1} Reading in Registers. 2} in P. T. & m.	1} Drawing in Registers. 2} in P. T. & m.	1} Geog. M. 2} Object Lesson P. T. 3} Arith. m. 4} Drawing in Registers. 5} in P. T. & m.	1} Geog. M. 2} Object Lesson P. T. 3} Arith. m. 4} Drawing in Registers. 5} in P. T. & m.	1} Arith. in drafts. P. T. & m.	
1} Read 2} Bible. 3} M. 4} Read and 5} Registers.	1} Bible 2} M. 3} Read and Exposn. 4} M. 5} m.	1} Copy- books. 2} P. T. 3} Read and Exposn. 4} M. 5} m.	1} Reading in Playground. 2} in Playground.	Arith. Cards Registers.	1} Sim. Reading in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	1} Drawing in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	Arith. Registers.	1} Sim. Reading in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	1} Drawing in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	1} Drawing in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	1} Dictn. M. 2} Geor. P. T. 3} M. & m.	1} Dictn. M. 2} Geor. P. T. 3} M. & m.	1} Arith. in drafts. P. T. & m.	
1} Read 2} Bible. 3} M. 4} Read and 5} Registers.	1} Bible 2} M. 3} Read and Exposn. 4} M. 5} m.	1} Copy- books. 2} P. T. 3} Read and Exposn. 4} M. 5} m.	1} Reading in Playground. 2} in Playground.	Arith. Cards Registers.	1} Sim. Reading in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	1} Drawing in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	Arith. Registers.	1} Sim. Reading in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	1} Drawing in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	1} Drawing in Registers. 2} in Registers. 3} Read in Registers. 4} Cards in Registers. 5} in Registers.	1} Dictn. M. 2} Geor. P. T. 3} M. & m.	1} Dictn. M. 2} Geor. P. T. 3} M. & m.	1} Arith. in drafts. P. T. & m.	

TIME-TABLE FOR A SCHOOL OF 140 BOYS.—MASTER AND THREE PUPIL-TEACHERS.

## II. EXAMINATION QUESTIONS.

*Collected from the Minutes of the Committee of Council  
on Education.*

1. State the method by which you endeavour to obtain the co-operation of your scholars in securing order and discipline.
2. Write an essay on the connection between moral and intellectual training.
3. What rules are most important for the moral training of children?
4. What kind of children give most trouble, and how are they best kept in order?
5. Write an essay on the best way of training children in habits of truthfulness and industry.
6. Describe the arrangements by which you would prevent waste of time, correct indolence and inattention, and promote a general tone of cheerfulness and willing obedience.
7. By what exercises are habits of attention best cultivated?
8. Write a theme on "As is the master so is the school."
9. On what qualities in a master does the good discipline of a school depend?
10. State the considerations that should be present in the use of praise.
11. What is the force of rebuke? How should it be tempered?
12. What do you understand by the emotions of action? How may they be made available in the discipline of a school?
13. How will you train your pupils in habits of good behaviour?
14. What are the advantages of exercise and drill?
15. Give directions as to an apprentice on the discipline of a class.
16. Why is example stronger than precept?
17. Enumerate the punishments used in schools, and show their adaptation to their respective ends.
18. How will you deal with conceit?
19. Show the relation of action to precept.
20. What kinds of examples should be used in moral instruction? Give reasons.
21. Distinguish between "sympathy of numbers" and "public opinion."
22. How will you proceed to form a good "public opinion" in your school?

23. Write an essay on the use of imitation in discipline.
24. Show the necessity of authority to school discipline.
25. What are the difficulties in training the will?
26. How will you establish habits of order and obedience?
27. Write an essay on rewards and punishments.
28. "A master who has to punish frequently is unfit for his position." Prove this.
29. Write an essay on the duties and rewards of schoolmasters.
30. Write an essay on the privileges and responsibilities of schoolmasters.
31. What are the advantages of home lessons? What lessons would you appoint as home work?
32. What means will you adopt to secure (a) regular, (b) punctual attendance?
33. What different plans have been proposed for the organization of a school?
34. What do you understand by the organization of a school? How would you organize one of 80 children?
35. What is classification? How would you proceed to classify a new school? What forms of classification would you employ?
36. What must you do to form a good time-table?
37. How would you organize a school of 130 children?
38. How would you organize a mixed school? What special regulations are required for such school?
39. How may you best combine evening classes with day schools where there are no pupil-teachers?
40. What uses do you make of the black-board in reading, spelling, writing, and arithmetic?
41. What is the proper use of parallel desks and of a gallery? Give dimensions for their construction.
42. What registers are required in school-keeping? Give a specimen page of each.
43. What should the registers record, for the master, the managers, and the Government respectively?
44. What particulars have to be supplied from the registers for Form IX.?
45. How must the registers be kept to supply accurately and readily the particulars for Form IX.?
46. When should the class registers be marked? What checks will you have on their accuracy?
47. What is an average? Give full illustrations of it.
48. How do you find average attendance for a week, for a quarter, and for a year?
49. How do you find the average amount (a) of each child's attendance; (b) of each child's payments?
50. What methods have been proposed for giving first lessons in reading?
51. What plans have been used to teach children reading after they have mastered easy words?
52. Describe clearly your method of teaching the alphabet, and to read words of one syllable.

53. Describe one of the following methods of teaching to read:—  
(a) The name method; (b) the phonic method; (c) the look-and-say method.

54. What is the use of learning to write when learning to read?

55. What is the object of simultaneous reading? How may its defects be supplied?

56. What are the weak points in class reading when it is individual?

57. What are the qualities of good reading? How may they be obtained?

58. How will you deal with indistinctness and slurring? How will you teach right accentuation?

59. Describe a good set of reading books. Why do you think them good?

60. Give instructions as to a pupil-teacher on the management of a class in reading.

61. What are the disadvantages to reading and spelling from the neglect of explaining the reading lessons?

62. State the arguments for and against the use of spelling-books. What is a good spelling-book?

63. What are the chief difficulties in learning to spell?

64. Give the advantages and disadvantages of transcription and dictation respectively. How may the defects of each be guarded against?

65. How do you conduct a dictation lesson? How do you teach punctuation?

66. What are the first lessons in writing that you would give to young children?

67. Describe first lessons in penmanship. What must receive chief attention?

68. Compare Mulhauser's method of teaching penmanship with that of Locke. Which do you prefer?

69. What use would you make of the black-board for teaching writing? In which classes would you use it?

70. What are the best copies for children in small hand? How are they best set?

71. Analyze the forms of written letters, and state the order in which you would take them.

72. What are the qualities of useful penmanship? How is each of them to be secured?

73. Describe first lessons in arithmetic.

74. How will you teach children to write down numbers correctly?

75. Distinguish between numeration and notation, and give your method of teaching them.

76. Describe a good system of mental arithmetic for the several classes of a school.

77. What means must you adopt to secure an intelligent and rapid progress in arithmetic?

78. How would you teach a child to draw a map?

79. What advantages accrue from lessons in geography in an elementary school?
80. How would you teach grammar in an elementary school?
81. What instruction in grammar do you deem most appropriate for poor children?
82. What is the best method of teaching history?
83. Distinguish between simultaneous teaching and simultaneous answering. What are the defects to be guarded against in both?
84. What are the advantages of collective lessons?
85. What do you understand by notes of lessons?
86. What are the characteristics of a good lesson?
87. How would you get a pupil-teacher to keep his class in order?
88. What are the points requiring attention in class management?
89. On what principle do you draw up notes of a lesson?
90. To what points would you give your attention if required to criticise a lesson?
91. What do you conceive the best method of questioning?
92. What is the use of ellipses? What is to be guarded from in their use?
93. What do you consider teaching to consist in?
94. Distinguish between teaching, instructing, informing, and learning.
95. What artifices should be employed to keep a class attentive?
96. What uses should be made of the black-board in class teaching?
97. What would be your practice in relation to the difficulties of learners?
98. What is the best way to become a good schoolmaster?

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